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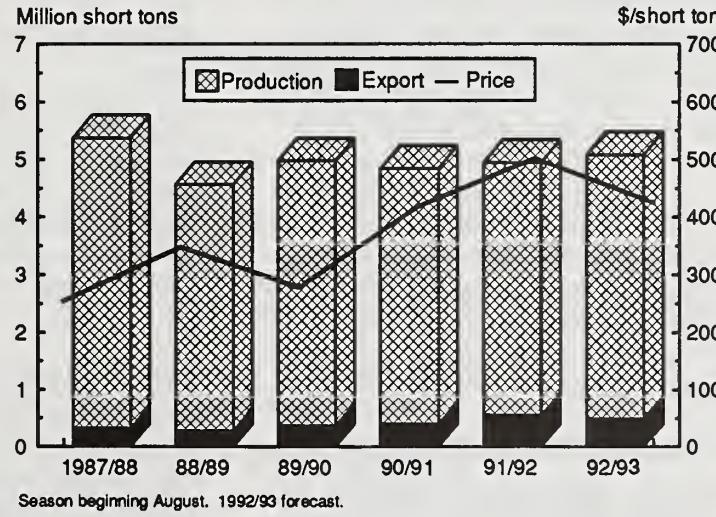
Economic
Research
Service

TFS-262
August 1992

Fruit and Tree Nuts

Situation and Outlook Report

**U.S. Apples: Total Production, Fresh-Market
Exports, and Fresh-Market Average Grower Prices**



Contents

	Page
Fruit Price Outlook	
Grower and Retail Prices Lower in 1992	5
Noncitrus Fruit	
1992 Apple Production Up 3 Percent, Prices Lower in 1992/93	6
U.S. Retail Banana Prices Down 11 Percent in 1992, Imports Up 12 Percent	9
Larger U.S. Grape Crop Forecast for 1992	10
Near-Record Pear Crop Forecast for 1992	12
Larger Crops of Most Stone Fruits Forecast, but 1992 U.S. Peach Crop Down	14
1992 Olive Crop Forecast Up 108 Percent	18
Larger Kiwifruit Crop Expected in 1992	19
Consumption of Three Major Tropical Fresh Fruits Tripled from 1970 to 1990	20
Berries	
1992 Cultivated Blueberry Production Down, Wild Blueberry Production Up	21
1992 Strawberry Production Up From 1991 Record	22
1992 Cranberry Crop Down from 1991 Record	24
Citrus Outlook	
U.S. Orange Production Up 13 Percent in 1991/92	26
Florida Produces Fewer Processing Oranges in 1991/92	28
1991/92 Grapefruit Production Dips	31
Tree Nut Outlook	
1992 Almond Crop Up 12 Percent, Walnut Crop Down 15 Percent	32
Special Article:	
Forecasting Fresh Apple Prices for Selected Months in the Marketing Season	34
List of Tables	37
List of Figures	38

Situation Coordinator

Dennis A. Shields

Voice (202) 219-0884 FAX (202) 219-0042

Principal Contributors

Boyd M. Buxton (202) 219-0884 Dennis A. Shields (202) 219-0884
Diane R. Bertelsen (202) 219-0884 John M. Love (202) 219-0886

Graphics and Table Design & Layout

Wynnice P. Napper (202) 219-0884

Word Processing and Design & Layout

Kyra A. Toland (202) 219-0882

Approved by the World Agricultural Outlook Board. Summary released August 19, 1992. The summary of the next *Fruit and Tree Nuts Situation and Outlook* is scheduled for release in September 1992. Summaries and text of reports may be accessed electronically; for details, call (202) 720-5505.

The *Fruit and Tree Nuts Situation and Outlook* is published three times a year and supplemented by a yearbook.

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Summary

Larger crops of most summer fruit, oranges, apples, and pears likely will result in lower grower and retail fruit prices in the summer and fall of 1992. F.o.b. prices for fresh-market peaches, plums, nectarines, grapes, and California peaches were lower in July 1992 than a year earlier. A considerably larger California orange crop lowered 1991/92 grower prices for fresh-market oranges. Larger 1992 crops of apples and pears are expected to lower grower prices in 1992/93 from record levels in 1991/92.

Larger 1992 Crops of Most Noncitrus Fruit Lowers Prices

USDA's August 1 forecast placed 1992 U.S. apple production at 5.08 million short tons, up 3 percent from 1991, but 292,000 tons less than the 1987 record. If realized, the crop would be the second largest on record. Production in the Western States is expected up, while spring freeze damage reduced prospects in the Central States, especially in Michigan. A larger 1992 crop in the United States and Europe will likely lower U.S. grower prices for fresh apples during the 1992/93 marketing year. The August forecast of the 1992 U.S. pear crop was 941,450 tons, up 4 percent from last year and only 2 percent less than the 1990 record. A larger crop of fresh-market pears may lower grower prices in 1992/93, but processing demand and prices will remain strong.

The 1992 U.S. grape crop is expected to increase 10 percent after 3 years of declining production. Grower prices will likely be lower in the 1992/93 marketing year than the \$549-per-ton average for fresh grapes received in 1991/92. California table-type-grape production is expected to increase 5 percent.

Good growing conditions and the absence of major supply shocks in the last year resulted in a continuous supply of bananas from Central and South America. The U.S.-average retail banana price during the first half of 1992 was 47.1 cents per pound, compared with 52.7 cents in the same period last year. Prices are expected to decline seasonally for the remainder of 1992.

Large crops of plums, nectarines, apricots, and California peaches resulted in lower prices for most stone fruits in 1992. Production of tart and sweet cherries rebounded, resulting in lower prices. However, spring freeze damage in the Eastern and Southeastern United States reduced 1992 all-peach production to 1.26 million tons, down 6 percent from 1991.

The 1992 California olive crop was forecast at 135,000 short tons, up 108 percent from a year earlier. The average grower price is expected to decline from \$562 per ton in 1991. The 1992 California kiwifruit crop will likely

increase from 1991, due to a larger acreage of high-yielding, mature vines and good fruit set.

USDA's June 1, 1992, forecast placed California spring strawberry production at 552,000 short tons, 1 percent more than the 1991 record. The absence of a major winter freeze and warm spring weather got the California strawberry season off to an early start, with more shipments and lower prices in April, compared to the year earlier. After the April/May peak, fresh shipments slowed and prices firmed. The June 1992 grower price was \$1,306 per ton, up from \$822 in May and almost twice the June 1991 price. Spring freezes in key blueberry-producing States reduced cultivated blueberry production by 15 percent in 1992. However, the U.S. wild blueberry crop, which is mostly processed, is expected to be up 53 percent.

Larger 1991/92 Orange Crop Lowers Prices

California's 1991/92 orange crop is expected to be nearly 160 percent larger than the freeze-reduced 1990/91 crop. Navel orange output in 1991/92 was 1.31 million short tons, more than double last season's output of 593,000 tons. As the 1991/92 harvest progressed and production prospects increased, California all orange prices dropped by nearly 50 percent between November and December 1991 to \$12.19 per box (on-tree-equivalent returns), averaged \$5.76 in March 1992, and \$2.40 in July.

The Florida orange production outlook improved as the 1991/92 season progressed, from an initial forecast of 6.12 million short tons in October 1991 to the final forecast of 6.29 million tons in July 1992. However, Florida's 1991/92 orange crop remained 8 percent smaller than the 1990/91 crop, with Valencia oranges down 12 percent and early and midseason varieties down 5 percent. High juice yields kept Florida orange juice production near last season, and weak demand put downward pressure on prices.

Despite a 6 percent smaller Florida crop, U.S. grapefruit production is expected to be down just 2 percent in 1991/92, due to a record-large California crop. Retail prices of fresh grapefruit averaged 56 cents a pound in January-June 1992, compared to 62 cents in 1991.

1992 Almond Crop Up 12 Percent, Walnut Crop Down 15 Percent

Moderate gains in tree nut production, lower carryin stocks, and strong demand will likely strengthen grower prices in 1992/93. USDA's final forecast for 1992 California almond production was 275,000 short tons (shelled basis), down 4 percent from the June 1 forecast but up 12 percent from 1991. The industry expected an even larger crop, but cool weather and fog hampered

pollination, reducing production potential. The July 1 forecast for 1992 California walnut production was 220,000 tons (in-shell), 15 percent less than last year's record. An uneven bloom and the alternate-year bearing characteristic of some walnut varieties are the primary reasons for the smaller crop.

Special Article Forecasts Fresh Apple Prices for Selected Months

In a special article, fresh apple prices are predicted for 3 key months in the marketing season. The estimated total production of apples is used to forecast the November price; the November price is used to forecast the February price; and May 1 stocks are used to forecast the May price.

**Figure 1
Fresh Fruit: BLS Consumer Price Index**

1982-84 = 100

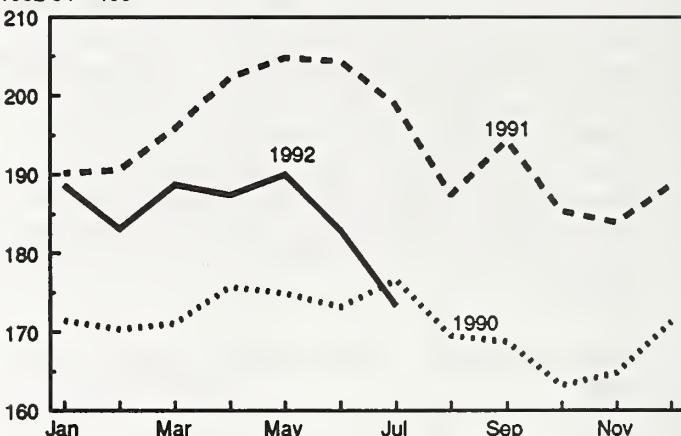


Table 1--U.S. monthly-average price indexes for fruits, selected months, 1991-92

Items	1991						1992						
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
1982=100													
Index of all fruit prices received by growers 1/	198	195	221	155	124	119	118	120	117	121	116	111	87
Producer Price Index:													
Fresh fruits--	148.3	136.9	132.9	122.5	111.1	99.6	100.0	88.7	86.8	84.6	86.8	79.7	70.8
Citrus fruits	237.4	237.6	238.0	209.9	181.6	141.5	136.1	107.1	105.1	112.7	122.6	96.2	94.6
Other fruits	118.4	103.2	97.7	93.2	87.5	85.4	88.0	81.7	79.4	73.7	71.2	75.6	65.3
Canned fruit and juices--	128.6	128.7	129.6	130.3	131.3	133.2	134.7	136.8	136.6	135.9	136.5	136.3	136.3
Canned fruits	126.6	127.6	130.0	131.0	130.2	131.6	132.8	132.6	132.8	131.3	132.8	132.9	132.8
Canned fruit juices	131.5	131.0	130.9	131.3	133.5	135.9	137.7	141.3	140.7	140.7	140.6	140.1	140.2
Frozen fruits and juices--	112.7	111.4	108.9	116.5	124.7	125.6	133.9	134.6	134.8	134.4	129.9	125.7	123.5
Frozen fruits	104.9	104.9	105.0	107.8	110.2	110.2	113.6	113.6	113.7	1/	113.5	113.5	113.1
Frozen juices	113.4	111.9	108.9	117.3	126.6	127.6	136.7	137.5	137.8	137.3	132.1	127.2	124.6
Dried fruits	111.9	110.5	111.5	111.9	111.8	112.0	113.7	115.1	114.9	114.4	115.1	114.3	113.9
Consumer Price Index:													
Fresh fruits	198.8	187.4	194.3	185.4	183.9	188.6	188.6	183.1	188.7	187.4	190.0	182.9	173.3
Processed fruits	130.6	130.9	131.3	130.5	131.4	131.5	136.0	138.5	138.8	140.0	140.0	138.3	138.4
Fruit juices and frozen fruits	131.2	131.3	131.8	130.8	131.8	131.8	137.2	140.2	140.6	142.0	141.9	139.9	139.6
Canned and dried fruits	126.5	127.4	127.5	127.3	127.9	128.5	129.8	130.6	130.3	130.9	130.8	130.8	131.9

1/ Index for fresh and processed.

Source: Bureau of Labor Statistics, U.S. Department of Labor and Economic Research Service, USDA.

Grower and Retail Prices Lower in 1992

Larger 1992 crops of most summer fruit, oranges, apples, and pears likely will result in lower grower and retail fruit prices this summer and fall.

Larger 1992 crops of most noncitrus fruit lowered grower and f.o.b. prices from a year earlier during most of the summer. California peach and nectarine f.o.b. prices were down about 30 percent in July from a year earlier. Fresh plum f.o.b. prices were significantly lower, less than half last year's price. A larger grape crop and ample supplies of competing summer fruit also pushed down f.o.b. prices for fresh-market grapes. An earlier harvest of fresh strawberries moved forward the seasonal price pattern. The June grower price for fresh strawberries was \$1,306 per short ton, almost twice the price in June 1991.

A smaller Washington apple crop and strong export demand have led to record-high prices since last September. The grower price for fresh apples averaged a record \$502 per ton in 1991/92, up from \$418 in the prior year. A smaller pear crop resulted in a record-high average grower price for all pears of \$303 per ton, up 8 percent from 1990/91. Larger 1992 crops and prospects for lower exports to Europe during 1992/93 are expected to lower grower prices for apples and pears.

The 1991/92 (November-October) California orange crop is expected to be nearly 160 percent larger than the freeze-reduced 1990/91 crop. Navel orange output more than doubled in 1991/92 and the 1991/92 Valencia crop is expected to be the second largest on record. Consequently, since January, grower prices for fresh-market oranges have been sharply below last year. Monthly on-tree prices for Florida processing oranges were also below a year earlier for most of the 1991/92 season. But near the end of the season, when Valencia oranges with high juice content were processed, May prices averaged \$7.55 a box, 50 cents higher than the prior year.

Consumer Price Index for Fresh Fruit Down in 1992

The Consumer Price Index (CPI) for fresh fruit was 173 (1982-84=100) in July, down 13 percent from a year earlier. Larger supplies lowered prices for fresh oranges, bananas, and summer fruits and reduced the index from record levels set in 1991. The CPI for bananas in July was 132.6, down 15 percent from July 1991, while the fresh orange CPI was 178.6 in July, down 37 percent. Apples were an exception to lower fruit prices in the first half of 1992. The apple CPI in June 1992 was 3 percent higher than a year ago.

During the last half of 1992, retail fresh fruit prices are expected to remain below last year. Large summer fruit supplies, a much larger California Valencia crop, and a large supply of bananas are expected to continue moderating fresh fruit prices in 1992. Later this fall, a larger apple crop is expected to lower apple prices. A larger winter pear crop should also put downward pressure on the index later this year and into 1993.

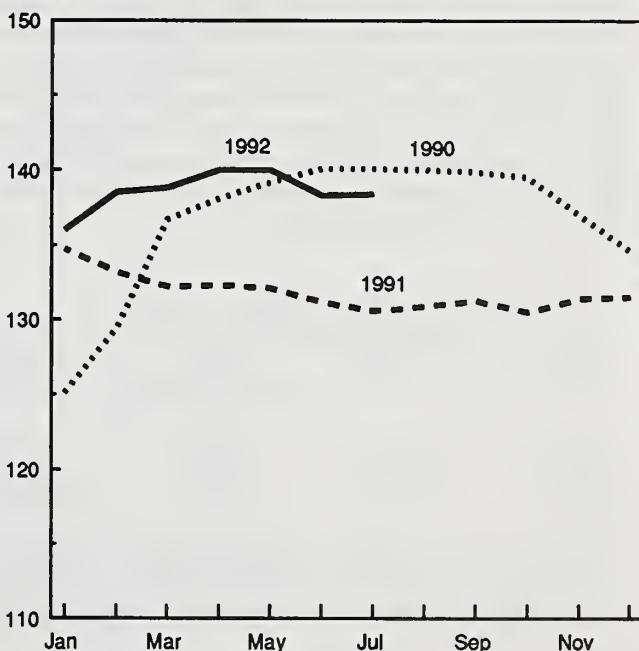
Processed Fruit CPI Rose Moderately in 1992

The processed fruit CPI in the first half of 1992 was higher than a year earlier, but lower than in 1990. In June, the processed fruit CPI was 138 (1982-84=100), up about 5 percent from a year earlier. Contributors to the higher index were higher prices for apple juice and canned fruit, including peaches, pears, and fruit cocktail. Higher orange juice yields in Florida and increased production in other States kept U.S. orange juice supplies stable. During the first 6 months of 1992, the average retail price of frozen concentrate orange juice (FCOJ) was \$1.94 per pound of 42 degree Brix concentrate, compared to \$1.92 during the first half of 1991.

Figure 2

Processed Fruit: BLS Consumer Price Index

1982-84 = 100



1992 Apple Production Up 3 Percent, Prices Lower in 1992/93

The U.S. apple crop is forecast at 5.08 million short tons, up 3 percent from 1991. Although domestic demand will likely continue to be strong, prices may be lower in 1992/93 as higher European apple production will likely reduce U.S. fresh-apple export demand.

USDA's August 1 forecast placed 1992 U.S. apple production at 5.08 million short tons, up 3 percent from 1991, but 292,000 tons less than the 1987 record. If realized, the crop would be the second largest on record. Production in the Western States, led by Washington, California, and Oregon, is expected up 9 percent. Fall and spring freeze damage reduced prospects in the Central States, especially in Michigan where the crop is forecast down 19 percent. Larger crops are expected in New York and most of New England, but total Eastern U.S. apple production is forecast down 2 percent. A cold, wet spring and late freezes limited the crop size in the Southern and Central Atlantic States.

Lower Fresh Apple Prices Expected in 1992/93

Larger 1992 crops in the United States and Europe will likely lower U.S. grower prices for fresh apples during the 1992/93 marketing year (August-July) from their record-high 1991/92 average of \$502 per ton. The larger U.S. crop, especially in Washington where production is forecast up 9 percent, will boost supplies of most apple varieties. Although U.S. demand for fresh apples is expected to remain strong, U.S. fresh-apple exports to Europe, a major 1991/92 export market, will likely decline, reducing export demand from the relatively high 1991/92 level. According to European industry estimates, 1992 apple production in the European Economic Community (EC) is expected to increase more than 50 percent from last year's freeze-damaged crop. Production in France, the world's largest fresh-apple exporter (if intra-EC trade is included), is expected to be up 66 percent from last year's freeze-reduced crop.

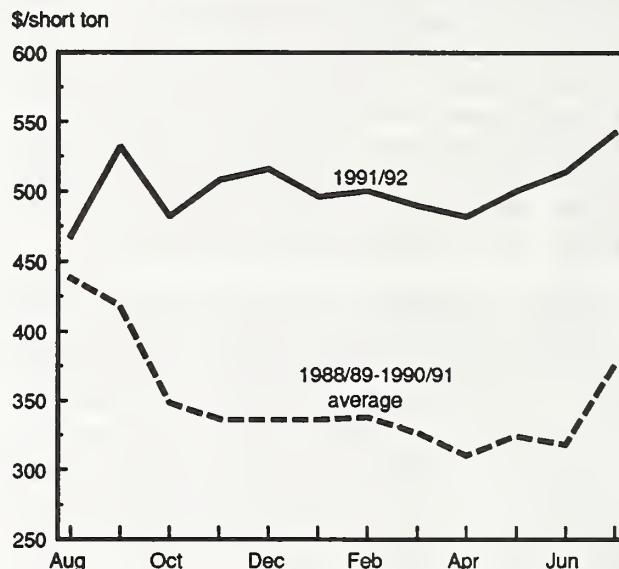
Table 2--Apples: Regional production, 1990, 1991, and indicated 1992 production

Area	1990	1991	1992
1,000 short tons			
East	1,249.5	1,503.3	1,467.5
Central	571.5	681.5	587.0
West	3,027.4	2,764.7	3,024.5
Total 1/	4,848.4	4,949.5	5,079.0

1/ Some figures may not add to total due to rounding.

Source: National Agricultural Statistics Service and Economic Research Service, USDA.

Figure 3
Fresh Apple Grower Prices



Larger Southern Hemisphere apple crops in early 1992, the lifting of trade sanctions on South Africa, and higher U.S. apple prices led to more fresh imports and increased apple juice supplies in recent months. Larger world supplies of processed apple products (especially juice) will put downward pressure on domestic juice prices, which typically establish a floor under U.S. fresh apple prices. The larger 1992 U.S. winter-pear crop will also compete for the consumer's fruit dollar, and may also be a factor in lower fresh-apple prices in 1992/93.

Fresh-Apple Exports to Southeast Asia Rise, Japan Still Restricted

U.S. fresh-apple exports from August 1991 to April 1992 reached 424,368 short tons, up 30 percent from a year earlier. Exports to the European Community (EC) were 98,427 short tons, almost double the 1990/91 level. Exports to Taiwan increased 1 percent to 60,264 short tons, while exports to Hong Kong were 38,108, up 2 percent. Japan's borders remain closed to fresh apple imports because of a phytosanitary regulation, but research and negotiations are underway to open that market.

Larger World Apple Crops May Weaken U.S. Juice-Apple Prices

Relatively smaller apple crops in the last few years in the Northwest and several major apple-producing countries reduced world apple supplies and increased prices for fresh and processing apples. Lower world apple supplies pushed U.S. juice-apple prices for growers to record highs in 1991/92. Partly because smaller supplies of imported apple juice were available last fall, the average U.S. grower price for juice apples was a record \$170 per ton, up almost 40 percent from 1990/91 and more than double the 1989/90 price.

But in early 1992, several Southern Hemisphere countries, including Argentina, New Zealand, Australia, and South Africa, harvested large apple crops. As the world apple supply increased, the price of U.S. apple juice imports from South America and Europe declined from highs of \$13-14 per gallon (71 degrees Brix) in January to \$10.50 in May.

U.S. apple juice production in 1992/93 will likely increase because three of the top four juice processing States (Washington, California, and New York) expect larger crops. The smaller apple crop in Michigan, which usually accounts for 10-15 percent of U.S. juice production, may result in higher processed-apple prices there. However, the larger U.S. crop and lower fresh-apple exports to Europe likely will reduce U.S. prices for fresh and processed apples in 1992/93. An abundant apple supply, as well as the possibility of increased 1992/93 orange juice production in the United States and Brazil, suggest a more competitive apple-juice selling market in 1992/93.

The United States is a large net importer of apple juice, primarily from Argentina, Germany, Austria, Hungary, and Chile. More than half of U.S. apple juice consumption is imported. In all but 1 of the last 6 years, U.S. imports exceeded estimated domestic-juice output, and in short-crop years in the U.S., imports made up almost two-thirds of total juice supply.

Table 3--Apples, commercial crop 1/: Total production and season-average price received by growers, 1990, 1991, and indicated 1992 production

State and area	Production 2/			Price per short ton	
	1990	1991	1992	1990	1991
	-- 1,000 short tons --			-- Dollars --	
Eastern States:					
Connecticut	16.5	13.5	20.0	528	546
Delaware	8.5	12.5	10.0	232	218
Georgia	11.0	16.0	12.5	264	272
Maine	44.0	43.5	45.5	448	460
Maryland	16.5	21.0	20.0	274	298
Massachusetts	42.5	40.0	44.0	478	510
New Hampshire	24.0	24.0	26.5	484	474
New Jersey	30.0	46.0	30.0	260	332
New York	495.0	525.0	550.0	258	254
North Carolina	115.0	130.0	105.0	200	178
Pennsylvania	225.0	275.0	270.0	284	228
Rhode Island	3.0	2.8	3.0	516	580
South Carolina	17.0	20.0	22.5	254	198
Vermont	21.5	24.0	23.5	426	438
Virginia	105.0	210.0	185.0	202	218
West Virginia	75.0	100.0	100.0	192	198
Total	1,249.5	1,503.3	1,467.5		
Central States:					
Arkansas	6.0	5.0	5.5	382	338
Illinois	30.0	34.5	35.0	350	348
Indiana	28.5	30.0	28.0	400	428
Iowa	4.8	4.0	4.5	442	580
Kansas	4.0	3.8	3.0	430	472
Kentucky	4.5	10.0	5.0	410	442
Michigan	375.0	465.0	375.0	206	214
Minnesota	10.0	12.7	15.5	748	858
Missouri	20.5	20.0	18.5	338	416
Ohio	60.0	60.0	60.0	348	470
Tennessee	4.3	6.5	6.0	358	308
Wisconsin	24.0	30.0	31.0	500	416
Total	571.5	681.5	587.0		
Western States:					
Arizona	32.0	28.5	42.5	160	282
California	390.0	400.0	410.0	312	452
Colorado	17.5	37.5	45.0	294	312
Idaho	82.5	60.0	47.5	270	386
New Mexico	3.4	1.2	6.0	358	452
Oregon	90.0	60.0	92.5	224	372
Utah	12.0	27.5	31.0	376	360
Washington	2,400.0	2,150.0	2,350.0	328	442
Total	3,027.4	2,764.7	3,024.5		
United States	4,848.4	4,949.5	5,079.0	302	362

1/ In orchards of 100-or-more bearing age trees.

2/ Includes unharvested production and harvested not sold (1,000 short tons): 1990-19.3, 1991-30.9.

Source: National Agricultural Statistics Service and Economic Research Service, USDA.

U.S. Retail Banana Prices Down 11 Percent in 1992, Imports Up 12 Percent

Expanding banana production in Latin America and increased imports have lowered retail banana prices.

Excellent growing conditions and the absence of major supply shocks (tropical storm damage, pest problems, or labor disputes) in the last year resulted in a continuous supply of bananas from Central and South America. However, rains in April and May in Ecuador reduced fruit quality. The Bureau of Labor Statistics' average retail price for bananas was 44.5 cents per pound in May, down from a record-high 58.4 cents in May 1991, when poor growing conditions temporarily disrupted banana supplies. The U.S.-average retail banana price during the first half of 1992 was 47.1 cents per pound, compared with 52.7 cents in the same period last year.

Banana prices seasonally rise in the spring and early summer months before summer fruit supplies are available. The annual high occurred during the second quarter of the calendar year in all but 1 of the last 12 years. Prices are expected to decline seasonally for the remainder of 1992.

U.S. Banana Imports Increased in Early 1992

Lower retail prices in early 1992 reflected larger imports. From January to May 1992, U.S. banana imports were 1.65 million short tons, up 12 percent from a year earlier. Costa Rican imports continued to surge, up 38 percent to 416,560 tons during this period. The United States' largest supplier, Ecuador, shipped 490,550 tons. Total U.S. banana imports have increased each calendar year since 1989, reaching 3.56 million tons in 1991, up 4 percent from 1990 and 11 percent from 1989.

Steady Supply and Large U.S. Fruit Crops Likely To Keep Downward Pressure on Banana Prices

Several major banana growing and trading companies with production in Latin America have anticipated more liberalized banana trade in the European Community (EC). Expectations of higher demand growth in Western and Eastern Europe and generally good prices led to heavy banana plantings during the last several years in Ecuador, Costa Rica, and Columbia. Consequently, 1992 banana production increased in these leading exporting countries.

Although new plantings may have now slowed, world banana production is expected to continue to expand into early 1993, further lowering world prices. The cycle may reverse sometime late next year, with prices beginning to firm up in 1994.

In July, the U.S.-average retail price of bananas was 43.2 cents per pound, down 7 percent from a month earlier, reflecting abundant supplies of summer fruit. Besides the seasonal price pattern for bananas, the fundamentals suggest that banana prices will be below 45 cents per pound for the rest of 1992 as larger fall apple and pear crops pressure banana prices.

EC Banana-Import Policy Still Unresolved

The EC is attempting to consolidate its banana-import policies by January 1, 1993. Currently, about one-half of EC banana imports enter duty free, mostly into Germany where no tariff is applied (within a certain quota). Other countries favor their former colonies in Africa, the Caribbean, and the Pacific (ACP countries) by offering unrestricted access and no tariff, whereas imports from Latin America pay a 20-percent tariff.

In early April, the EC Commission proposed a fixed quota and a 20-percent tariff for Latin American bananas, including imports to Germany. The EC-member countries must approve the recommendation, and more negotiations will take place before a final policy is established. Such a policy would substantially raise banana prices in Germany and reduce exports to Europe from Latin American. A buildup in Latin American production in anticipation of a larger European market would likely increase supplies available for the U.S. and lower U.S. banana prices.

Several large firms substantially lowered banana prices in Europe in 1992 to gain market share before implementation of a new policy. Some in the industry speculate that the price war may lower banana prices even more in the United States. However, major U.S. banana companies may find that an unattractive alternative, given their sharply lower 1992 profits in Europe.

Table 4--Banana imports, United States, 1989-92

Country	1989	1990	1991	1991 1/	1992 1/
Short tons					
Ecuador	936,560	1,258,997	1,229,031	546,961	490,550
Costa Rica	702,281	630,016	756,521	301,553	416,560
Honduras	608,143	535,270	458,906	211,103	205,950
Colombia	469,825	393,868	500,408	188,734	188,548
Other	501,979	592,537	614,508	225,395	350,534
Total	3,218,788	3,410,689	3,559,374	1,473,745	1,652,143

1/ January-May.

Source: Bureau of Census, Dept. of Commerce.

Larger U.S. Grape Crop Forecast for 1992

The 1992 U.S. grape crop is expected to increase after 3 years of declining production. Average grower prices for fresh-market grapes (for fresh fruit consumption) in the 1992/93 marketing year will likely be lower than the \$549 per ton received in 1991/92.

USDA's August forecast for the 1992 U.S. grape crop places production at 6.13 million tons, up 10 percent from last year. Good growing conditions increased production in California, Washington, and Oregon. However, the Michigan grape crop is forecast down 13 percent because of a freeze in late May. Cool, wet weather slowed development in New York and Pennsylvania, where production is forecast down 22 percent and 15 percent, respectively.

California Grape Production Expected To Increase 12 Percent

The California all-grape crop is expected to total 5.60 million tons, 12 percent larger than last year. High May temperatures quickened crop maturity. The California table-type-grape forecast is 650,000 tons, up 5 percent from last year.

F.o.b. prices for table grapes in late July were around \$8.00 per 23-pound lug in California's San Joaquin Valley, down 20 percent from a year earlier. The larger and earlier crop has resulted in prices below last year's since the beginning of the season. Larger supplies of most other California summer fruit (especially peaches, plums, and nectarines) have also helped push prices lower. Reports from retail outlets indicated that lower prices for plums, nectarines, bananas, cherries, and melons were giving table grapes considerable competition. The California Table Grape Commission increased advertising in June and July to help stimulate consumer demand and move the larger crop. The season-average grower price for U.S. fresh grapes will likely be down from 1991's \$549 per ton.

Raisin-Type-Grape Production Up in 1992

California raisin-type-grape production in 1992 is expected to be 2.65 million tons (fresh weight), up 22 percent from 1991. Weather conditions were much more favorable in 1992, with less heat stress and better pollination weather than the prior year. Crop development is 3 weeks ahead of last year's late-maturing crop.

A strong market for white grape juice and strong demand from wineries may take a larger portion of the raisin-type-grape crop and may reduce the 1992 California raisin crop below last year. Well-managed stocks resulted in virtually no change in the wholesale price of bulk raisins for domestic sale in the last 3 years, about 82 cents per pound for Natural Seedless raisins.

California's Wine-Type-Grape Production Up 5 Percent, U.S. Exports Continue To Increase

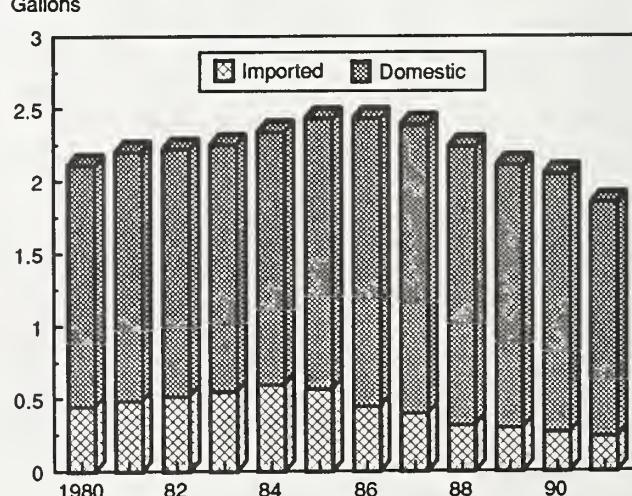
The California wine-type grape forecast is for 2.3 million tons, 5 percent greater than last year. Red-variety wine grapes are expected to produce a good crop this year, but a major white-wine variety, French Colombard, is expected to yield less. The industry reported good growing conditions this season.

The United States processed about 85 percent of the 1991 U.S. grape crop, with almost half of total grape crop processed into wine. Although a slightly larger tonnage of grapes was crushed in 1991, wineries paid more for all three varietal types and increased the U.S.-grower-average price for grapes processed into wine to \$314 per ton, up 12 percent from a year earlier.

In 1991, U.S. per capita wine consumption declined for the fifth consecutive year. A higher federal excise tax and the slowdown in the economy may have contributed to the decline. However, media reports linking lower heart-disease risk with moderate wine consumption coincided with higher wine sales in the last 2 months of 1991 and into the new year. California wine shipments in the first quarter of 1992 (January-March) to all markets rose about 10 percent from a year earlier.

The U.S. wine trade deficit continued to narrow in 1991. The 1991 ratio of imports to exports (quantity) was 2-to-1, down from 8-to-1 in 1987. Wine exports increased 18 percent from 1990 to 1991, while imports decreased 7

Figure 4
U.S. Per Capita All-Wine Consumption
Gallons



percent. Higher yields in most wine-grape-producing countries and declining demand has led to excess world wine production and has pressured wine prices.

Washington Grape Production Expected Up

The August forecast of 1992 grape production for States other than California was 526,000 short tons, down 9 percent from last year's crop. About three-fourths of this is

Concord grape production, which is processed into juice, jam and jellies, or wine. Total grape production in Washington, the leading Concord grape State, is forecast up 10 percent. However, grape production in New York and Michigan is expected to be down, 22 and 13 percent, respectively. Grape development in New York is 2 weeks behind normal, and berry size and sugar levels are well below normal. A late-spring freeze reduced production in some vineyards in Michigan.

New Phylloxera Attacks Northern California's Premium Grapes

Phylloxera, an aphid-like insect believed to be native to the Eastern United States, attacks grapevine roots, weakening and eventually killing the host plant. With a weakening of the grapevines, lower fruit quality and production result. Native American varieties are able to resist the pest, but the superior "vinifera" wine grape varieties introduced into the United States from Europe during the 19th century are susceptible. During the last half of the 19th century, phylloxera ravaged viticulture throughout the world, including the newly established northern California wine grape industry.

Grafting onto phylloxera-resistant hybrids of native American and "vinifera" rootstock appeared to contain the pest. Consequently, during much of the 20th century, phylloxera remained a relatively obscure viti-cultural problem in California. But, in 1983 phylloxera symptoms reappeared in Napa County among grapes grafted on the predominate, and heretofore phylloxera-resistant, AxR-1 rootstock. Researchers linked the damage to a new strain, type B, which found AxR-1 a suitable host. Thus far the type-B infestation has been found only in Sonoma and Napa Counties, where AxR-1 is the dominate wine-grape rootstock.

AxR-1 is not widely used in other California grape-producing areas.

Wine grape vines normally have a productive life of 20 to 30 years. Controlling the current outbreak of type B phylloxera will require accelerated replanting of about 40,000 acres of grape vines of AxR-1 rootstock over the next 8 to 12 years. Although the grape supply from Napa and Sonoma Counties is expected to decline progressively over the next several years as the new type of phylloxera spreads, grape production will eventually exceed current levels early in the 21st century when all of the new plantings come into full bearing.

Estimates for the cost of reestablishing a vineyard range from \$8,000 to as much as \$12,000 per acre, spread over a 3 or 4 year period. In addition, growers lose the revenue from grape sales until the new vines are mature, approximately 4 to 5 years. On the other hand, the new plantings can raise average yields because of the use of superior cultivars, closer spacing of plants, and improved irrigation and trellis systems. The higher yields offset some of the establishment costs and revenue losses associated with vine replacement.

Table 5--Grapes: Total production and season-average price received by growers in principal States, 1990, 1991, and indicated 1992 production

States	Production 1/			Price per short ton	
	1990	1991	1992	1990	1991
-- 1,000 short tons --					
Arizona	26.0	25.0	20.0	870	787
Arkansas	5.1	11.0	5.0	327	313
Georgia	2.9	3.2	3.4	777	811
Michigan	46.0	46.0	40.0	291	281
Missouri	1.3	3.1	1.5	378	356
New York	144.0	192.0	150.0	286	254
North Carolina	1.5	2.2	2.1	533	611
Ohio	7.7	9.1	9.0	304	275
Oregon	7.0	9.6	12.5	780	840
Pennsylvania	53.0	78.0	66.0	285	229
South Carolina	0.4	0.7	0.5	803	530
Washington	180.0	196.0	216.0	316	279
Total 2/	474.9	575.9	526.0		
California:				-- Dollars --	
Wine	2,195.0	2,195.0	2,300.0	308	344
Table	645.0	620.0	650.0	429	438
Raisin 3/	2,345.0	2,165.0	2,650.0	237	245
All	5,185.0	4,980.0	5,600.0	291	313
United States	5,659.9	5,555.9	6,126.0	295	312

1/ Includes unharvested production and harvested not sold (tons): 1990-120, and 1991-630. 2/ Some figures may not add due to rounding.

3/ Fresh basis.

Source: National Agricultural Statistics Service, USDA.

Near-Record Pear Crop Forecast for 1992

A larger crop of fresh-market pears may lower grower prices in 1992/93, but processing demand and prices will remain strong.

The August forecast of the 1992 U.S. pear crop was 941,450 short tons, up 4 percent from last year and only 2 percent less than the record in 1990. All States (except Michigan and Pennsylvania) met or increased production from 1991, especially in the Pacific Coast region where, unlike 1991, winter damage was minimal.

Larger 1992 Fresh-Market Pear Production May Lower the Average Grower Price From Its 1991/92 Record

Production of other-than-Bartlett pears (fall and winter pears) in the Pacific Coast States is forecast at 355,000 tons, up 3 percent from 1991. More than 85 percent of the other-than-Bartlett crop is usually marketed fresh. In Washington, early-spring conditions were favorable for a full crop until poor pollinating weather reduced prospects. However, Washington production is still expected to increase 2 percent from the 1991 freeze-damaged crop.

New York, Colorado, and Utah also expect larger 1992 pear crops. In July, the New York pear crop was in excellent condition, with good fruit size and development. The Michigan pear crop is expected to be smaller because of freeze damage and cool temperatures during the growing season. Good bloom conditions in California and adequate chilling hours contributed to a high-volume, good-quality crop of fresh-market Bartlett pears in 1992.

In the fall of 1991, smaller production pushed grower's prices for fresh pears to record highs. The average fresh-market pear price in 1991/92 (July-June) was a record \$385 per ton, up 7 percent from 1990/91. A larger other-than-Bartlett crop in 1992 and an earlier harvest, especially in Washington, may lower grower prices from a year earlier. Also, a significantly larger apple crop in the Northwest should also increase fruit price competition and reduce demand for fresh-market pears in the 1992/93 marketing season.

Fresh pear exports, which have increased for 9 consecutive years, will help move the larger crop and moderate the price decline. Exports in 1991/92 (July-June) were more than 10 percent higher than the record of 111,238 short tons set in 1990/91. Exports to the EC jumped almost 25 percent after poor weather reduced 1991 production there. Strong demand and relaxed trade restrictions increased U.S. shipments to Mexico more than 40 percent in 1991/92. Mexico ranks as the United States' second largest export market for pears after Canada.

Processed-Pear Demand Remains Strong

Bartlett pear production (about 75 percent is processed) in California, Oregon, and Washington is forecast at 550,000 tons, up 4 percent from last year. Cooler weather in California slowed maturity in June, but good quality and size is expected to accompany a crop of 315,000 tons, up 5 percent from 1991. Washington Bartlett production is expected to be 160,000 tons, the same as last year, while Oregon production will increase 7 percent from 1991.

Processing-pear prices at the grower and wholesale levels were relatively high in 1991/92 (July-June). A smaller 1991 crop did not replenish the already tight pear-juice-concentrate market. In July, the wholesale price of pear juice concentrate was about 75 percent higher than a year earlier. The average grower price for processing pears in 1991/92 (July-June) was \$219 per ton, up 7 percent, while wholesale prices for canned pears and fruit cocktail were up 15 percent from a year earlier.

In July, the Washington-Oregon Canning Pear Association and processors agreed to a price of \$230 per ton for No. 1 Bartlett pears, up \$5 from 1991. In California, the 1992 canning-pear price is \$227 per ton, down only \$2 from the record set last year. The relatively high, processed pear price mostly reflects strong domestic demand.

Figure 5

U.S. Fresh Pear Consumption

1,000 short tons

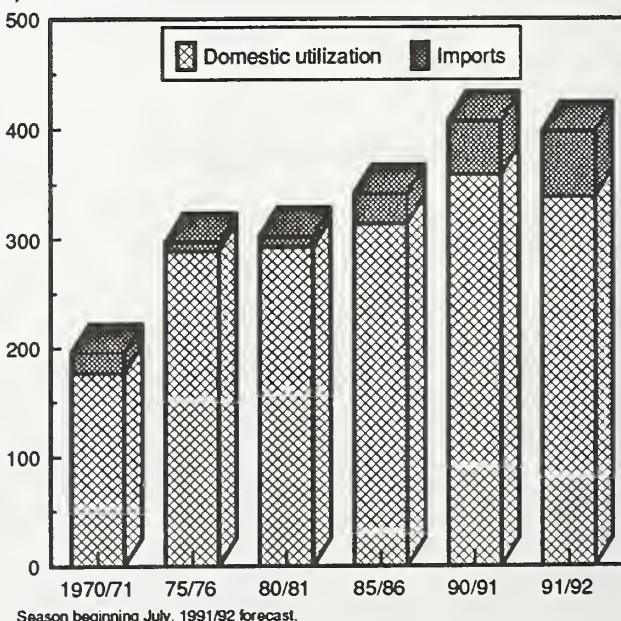


Table 6--Pears: Total production and season-average price received by growers, by States and Pacific Coast, variety comparison, 1990, 1991, and indicated 1992 production

State and area	Production 1/			Price per short ton	
	1990	1991	1992	1990	1991
	-- Short tons --			-- Dollars --	
California	332,000	317,000	335,000	251.00	263.00
Colorado	2,500	3,100	4,000	336.00	298.00
Connecticut	1,100	1,200	1,450	550.00	600.00
Michigan	2,500	5,000	4,000	267.00	273.00
New York	14,600	14,500	19,000	253.00	275.00
Oregon	233,000	220,000	230,000	266.00	301.00
Pennsylvania	3,300	5,500	5,000	358.00	418.00
Utah	2,800	2,200	3,000	380.00	440.00
Washington	372,000	336,000	340,000	312.00	341.00
United States	963,800	904,500	941,450	280.00	303.00
Pacific Coast:					
California--					
Bartlett	314,000	300,000	315,000	242.00	252.00
Other	18,000	17,000	20,000	410.00	458.00
Total	332,000	317,000	335,000	251.00	263.00
Oregon--					
Bartlett	83,000	70,000	75,000	244.00	272.00
Other	150,000	150,000	155,000	279.00	314.00
Total	233,000	220,000	230,000	266.00	301.00
Washington--					
Bartlett	177,000	160,000	160,000	248.00	270.00
Other	195,000	176,000	180,000	371.00	405.00
Total	372,000	336,000	340,000	312.00	341.00
3 States--					
Bartlett	574,000	530,000	550,000	244.00	260.00
Other	363,000	343,000	355,000	335.00	368.00
Total	937,000	873,000	905,000	NA	NA

NA = Not applicable.

1/ Includes unharvested production and harvested not sold (tons): 1990-150 and 1991-150.

Source: National Agricultural Statistics Service, USDA.

Large Crops of Most Stone Fruits Forecast, but 1992 U.S. Peach Crop Down

Large crops of plums, nectarines, apricots, and California peaches resulted in lower prices for most stone fruits in 1992. Production of tart and sweet cherries rebounded, resulting in lower prices.

Spring Freezes Nip Peach Crop In East, U.S. Production Down 6 Percent

Spring freeze damage in the Eastern and Southeastern United States reduced 1992 all-peach production to 1.26 million short tons, down 6 percent from 1991. However, freeze damage was minimal in the Rocky Mountain and Pacific Coast States. The U.S. freestone peach crop (mostly fresh-market production) is expected to total 707,750 short tons, down 14 percent from last season.

Freestone peach production is expected to decline from the 1991 bumper crops in South Carolina (forecast down 53 percent), Georgia (down 13 percent), New Jersey (down 26 percent), and Pennsylvania (down 15 percent). However, California production is expected to reach 320,000 tons, up 5 percent from last year. California, the largest peach-producing State, accounts for more than 45 percent of the U.S. fresh-market peach crop. New plantings coming into production, sufficient chilling hours, ideal weather in the spring, and a uniform bloom helped increase California's 1992 peach production. Fruit quality in California was generally good, with fruit size reported as average in July.

The smaller, and generally later, peach harvest in the Southeast buoyed the July monthly grower price, hitting \$386 per ton, up 18 percent from last year. Compared

with a year ago, f.o.b. peach prices in July ran about 10 percent lower in California, but they were about 15 percent higher in South Carolina and Georgia.

At the retail level, a smaller U.S. crop was offset by competition from larger supplies of other fruit, especially plums and nectarines. The retail price reported by the Bureau of Labor Statistics averaged 78.1 cents per pound in July, nearly the same as a year ago. Large California peach supplies and competition from other summer fruit likely will keep peach prices near last year's low level for the rest of the season.

Clingstone peach production, primarily processed into canned peaches or fruit cocktail, is forecast at 550,000 short tons, up 7 percent from 1991. In June, the California Canning Peach Association reported that the price negotiated with canners will be based on a sliding scale of \$220 to \$233 per ton, depending upon the total amount delivered and discounted as offgrade. Last year, the agreement between the association and the canners set the base prices at \$222 to \$235 per ton.

Although the 1991 California Clingstone crop was larger than in 1990, a lower processing yield resulted in smaller supplies of canned peaches. Wholesale prices for canned peaches were almost 10 percent higher, and retail sales were off about 6 percent in 1991/92 (June-May) compared to a year earlier.

Rain in Washington Dampens Excellent Sweet Cherry Crop, U.S. Crop Still Up 12 Percent

The U.S. sweet cherry forecast placed 1992 production at 169,500 short tons, up 12 percent from 1991 and up 8 percent from 1990. In the Northwest, cherry production rebounded from the effects of the December 1990 cold wave, but June rains reduced an expected bumper crop in Washington. Nevertheless, Washington output was forecast at 65,000 tons, up 30 percent from 1991. In mid-June, f.o.b. prices for Bing cherries in Washington's Yakima Valley at \$15.40 per 20-pound carton (12-row size), down from \$20.67 a year earlier.

The Oregon crop also benefitted from a mild winter and it suffered no rain damage. Oregon sweet cherry production was estimated at 53,000 tons, more than one-third greater than last year. The fresh-market cherry harvest, marked by excellent fruit quality, finished in June. In Michigan, spring frosts and high winds damaged the crop, which is expected to be down 23 percent to 17,000 tons.

Figure 6

U.S. Stone Fruit Production

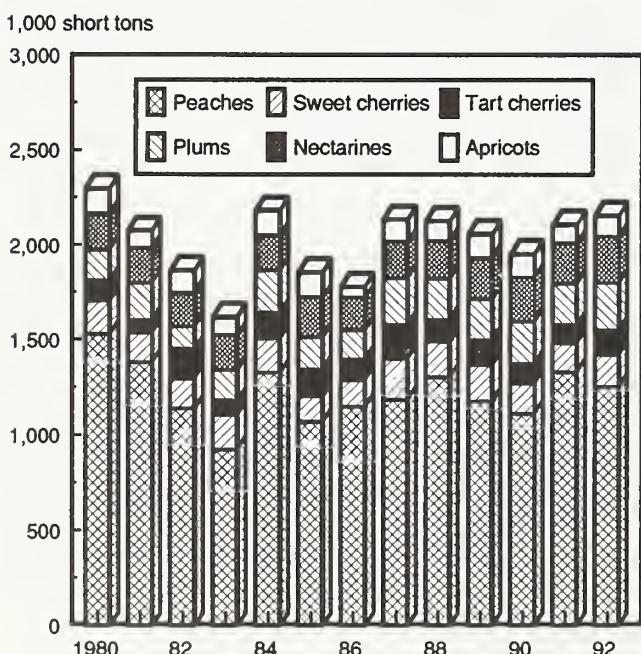
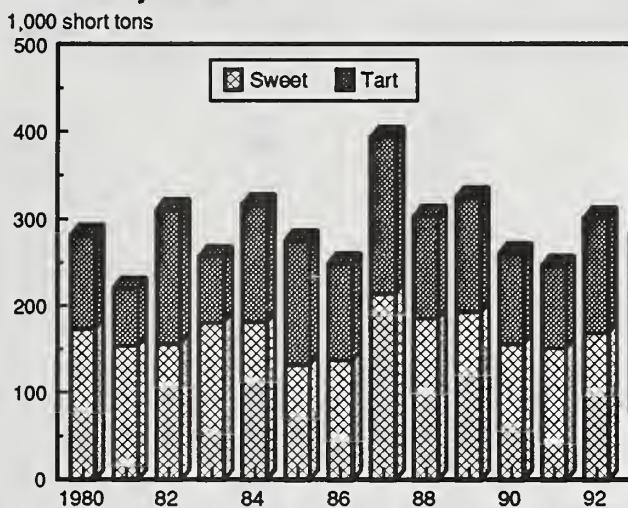


Figure 7
U.S. Cherry Production



Fruit development was also slowed by cool, dry spring temperatures.

The California and Northwest sweet cherry industries reported substantial shipments to Japan. A larger crop of good-quality fruit and a longer time period for imports into Japan helped boost U.S. sweet-cherry exports. USDA's Agricultural Marketing Service reported 1992 fresh cherry exports through August 1 were 55,850 short tons, up 38 percent from 1991.

Tart Cherry Crop Rebounds in Michigan

U.S. tart cherry production was forecast at 132,400 short tons, up 39 percent from 1991 and up 27 percent from 1990. The Michigan tart cherry crop, which more than half of U.S. production, was 92,500 tons, up from 55,000 last year. However, industry estimates place Michigan production lower than the USDA forecast because of especially low output in the northwest part of the State.

The mild winter and warm spring in the Pacific Northwest provided excellent conditions for tart cherries. Utah production is estimated at 16,000 tons, up 23 percent, while the Oregon crop is estimated at 5,000 tons, up one-third from 1991.

In late June, the Michigan Red Tart Cherry Growers Marketing Committee recommended a grower price of 46 cents per pound (U.S. No. 1 cherries, graded at 92). However, some processors were offering cash purchases in the 25-30-cent-per-pound range. In 1991, the U.S.-average grower price for tart cherries for processing was 44.8 cents per pound, up from 17.6 cents in 1990.

Record 1992 California Plum Crop Forecast, Prune Production Up 7 Percent

The 1992 California plum forecast was 250,000 short tons, up 15 percent from 1991 and up 12 percent from 1990.

Excellent spring and summer weather led to the record-breaking crop. The large California plum crop, along with large supplies of almost all other fresh summer fruits, reduced f.o.b prices for California plums to \$2.00 per 28-pound carton in mid-July, down 50 percent from last year. In some cases, picking and hauling costs exceeded grower prices, and fruit in some orchards was not harvested.

Dried-prune production in California is expected to total 200,000 tons, up 7 percent from 1991 and up 36 percent from 1990. The 1992 crop was reported clean and relatively free of defects.

Plum and prune crops in Idaho, Michigan, Oregon, and Washington were expected to total 41,600 tons, up 66 percent from 1991. The Idaho crop is expected to be larger than last year even though it was damaged by an early April frost. Memorial Day weekend frosts significantly damaged the Michigan crop. The prune and plum crop in Oregon, the second largest producing State after California, is expected to be 20,000 tons, up from only 4,000 in 1991.

Record Nectarine Crop Forecast in 1992, Prices Much Lower

A record-large 1992 California nectarine crop was forecast at 240,000 short tons, up 12 percent from 1991 and up 3 percent from 1990. Harvest was active in June and July due to warm weather and rapidly maturing fruit. Almost half of the crop was picked by July 1. The relatively high-quality crop helped move the increased volume in 1992. F.o.b. nectarine prices in mid-July in California's San Joaquin Valley dropped to \$5.20 per carton, 35 percent lower than last year.

Apricot Production Forecast Up 15 Percent in 1992

The final forecast of 1992 U.S. apricot production was 110,150 short tons, up 15 percent from last year. In California, production was expected to total 105,000 tons, up 17 percent. Fruit sizes were smaller than normal due to early-season high temperatures. However, fruit quality was good to excellent. Unfavorable weather during pollination reduced Washington's production to 4,500 tons, down 21 percent from a year earlier. High temperatures in June caused the crop to mature 1 to 2 weeks ahead of normal, reduced apricot size and lowered output. In late June, f.o.b prices for California apricots were \$14 per 20-pound carton, compared with \$18 in 1991. The 1992 U.S.-average grower price will likely be lower than last year's \$802 per ton for fresh-market apricots and \$289 per ton for apricots for processing. About 15 percent of the crop is usually marketed fresh, about one-half is canned, and the remainder dried or frozen.

Table 7--Peaches: Total production and season-average price\ received by growers, 1990, 1991, and indicated 1992 production

State	Production			Price per short ton	
	1990 1/	1991 1/	1992	1990	1991
	-- 1,000 short tons --			-- Dollars --	
Alabama	6.0	8.0	6.5	476	426
Arkansas	9.0	6.0	6.0	492	500
California:					
Clingstone 2/	506.0	515.0	550.0	214	218
Freestone	300.0	305.0	320.0	340	264
Colorado	8.5	1.0	9.0	712	760
Connecticut	1.8	1.7	1.8	940	1,020
Delaware	0.1	1.5	1.5	830	570
Georgia	65.0	75.0	65.0	598	482
Idaho	2.4	3/	1.3	434	2/
Illinois	0.2	9.8	8.0	686	660
Indiana	0.4	2.3	1.5	682	792
Kansas	0.1	2.5	0.3	460	740
Kentucky	3/	2.0	2.0	3/	700
Louisiana	2.0	2.5	1.8	680	720
Maryland	2.0	7.5	6.0	654	484
Massachusetts	1.0	1.0	1.0	940	1,020
Michigan	22.5	20.0	20.0	420	348
Missouri	0.4	5.5	3.0	600	460
New Jersey	22.5	57.5	42.5	818	506
New York	7.0	7.5	6.8	552	548
North Carolina	5.0	17.5	6.0	540	352
Ohio	2.8	2.9	3.5	760	800
Oklahoma	4.0	15.5	2.7	726	610
Oregon	7.3	6.5	7.5	598	712
Pennsylvania	38.0	50.0	42.5	578	402
South Carolina	55.0	155.0	72.5	486	354
Tennessee	0.7	3.3	1.4	740	600
Texas	12.0	16.0	13.5	700	680
Utah	6.0	1.3	5.5	480	680
Virginia	1.3	13.0	12.5	630	382
Washington	26.5	15.0	27.5	510	424
West Virginia	1.5	9.0	9.0	536	286
United States	1,116.6	1,336.2	1,257.8	348	316

1/ Includes unharvested production and harvested not sold (1,000 short tons): United States, excluding California clingstone, 1990-18.3, 1991-60.3

2/ California clingstone is over-the-scale tonnage and includes culs and cannery diversion (1,000 short tons): 1990-28.5, 1991-30.

3/ No significant commercial production due to frost.

Source: National Agricultural Statistics Service and Economic Research Service, USDA.

Table 8--Apricots and nectarines: Total production and season-average price received by growers, 1989, 1990, 1991, and indicated 1992 production

Item and State	Production 1/				Price per short ton		
	1989	1990	1991	1992	1989	1990	1991
	-- 1,000 short tons --				-- Dollars --		
Apricots--							
California	118.0	115.0	90.0	105.0	323	323	374
Utah	0.4	0.3	0.1	0.7	470	460	820
Washington	1.6	7.2	5.7	4.5	1,400	596	895
United States	120.0	122.5	95.8	110.2	338	340	407
Nectarines--							
California	220	232	215	240.0	398	474	402

1/ Apricots--includes unharvested production and harvested not sold (short tons): United States, 1988-8,100, 1989-1,050, 1991-2,010, and 1991-4,010.

Source: National Agricultural Statistics Service, USDA.

Table 9--Cherries, sweet: Total production and season-average price received by growers, 1990, 1991, and indicated 1992 production

States	Production 1/			Price per short ton	
	1990	1991	1992	1990	1991
	-- Short tons --			-- Dollars --	
California	22,000	36,000	27,000	891	942
Idaho	2,000	400	1,200	1,080	508
Michigan	16,000	22,000	17,000	512	685
Montana	280	2/	800	1,670	2/
New York	1,000	1,250	1,100	743	901
Oregon	48,000	40,000	53,000	644	862
Pennsylvania	50	1,100	800	1,620	1,530
Utah	1,400	800	3,600	645	875
Washington	66,000	50,000	65,000	1,180	1,200
United States	156,730	151,550	169,500	894	960

1/ Includes unharvested production and harvested not sold (tons): 1990-24,380 and 1991-8,150. 2/ No commercial production due to frost.

Source: National Agricultural Statistics Service, USDA.

Table 10--Cherries, tart: Total production and season-average price received by growers, 1990, 1991, and indicated 1992 production

States	Production 1/			Price per short ton	
	1990	1991	1992	1990	1991
	-- 1,000 short tons --			-- Dollars --	
Colorado	0.5	0.8	0.8	414	828
Michigan	80.0	55.0	92.5	370	962
New York	8.3	12.8	12.0	416	842
Oregon	3.8	3.8	5.0	258	590
Pennsylvania	1.8	5.8	2.5	564	964
Utah	7.8	13.0	16.0	282	892
Wisconsin	2.4	3.9	3.7	186	370
United States	104.4	95.0	132.4	362	896

1/ Includes unharvested production and harvested not sold (1,000 short tons): 1990-3.0 and 1991-0.1.

Source: National Agricultural Statistics Service and Economic Research Service, USDA.

Table 11--Plums and prunes: Production and season-average price received by growers in principal States, 1990, 1991, and indicated 1992 production

State and area	Production			Price per short ton	
	1990	1991	1992	1990	1991
	-- Short tons --			-- Dollars --	
Prunes and plums 1/:					
Idaho	6,800	3,000	4,600	275.00	383.00
Michigan	6,000	9,000	6,000	296.00	310.00
Oregon	21,000	4,000	20,000	155.00	228.00
Washington	14,000	9,100	11,000	166.00	253.00
Total 4 States	47,800	25,100	41,600	195.00	286.00
Dried prunes:					
California	147,000	187,000	2/ 200,000	873.00	954.00
Plums:					
California	223,000	218,000	250,000	603.00	449.00
United States (fresh basis)	733,900	832,100	891,600	NA	NA

NA = Not applicable.

1/ Includes unharvested production and harvested not sold (short tons): 1990-4,600 and 1991-300. 2/ Dry-fresh ratio is 3 to 1.

Source: National Agricultural Statistics Service, USDA.

1992 Olive Crop Forecast Up 108 Percent

The 1992 California olive crop was forecast at 135,000 short tons, up 108 percent from a year earlier. The average grower price will likely decline from 1991's \$562 per ton.

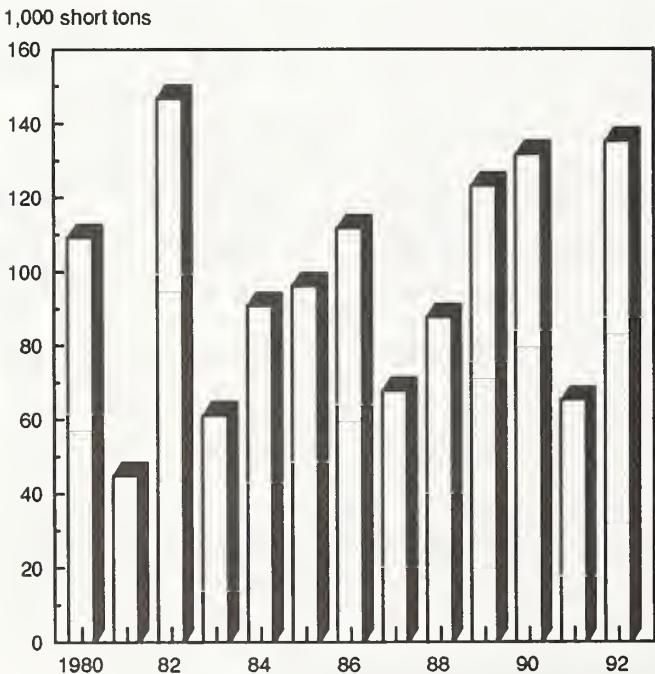
California olive production is expected to total 135,000 tons in 1992, the largest crop since 1982. Last year, bud damage from the December 1990 freeze cut production in half. A light crop in 1991, a good bloom, and more rain in 1992 will increase olive output, especially of the Manzanillo variety which is expected to be particularly large.

Olive Pack and Sales Declined in 1991/92

According to the California Olive Committee, ripe olive sales decreased about 3 percent in 1991/92 (Aug-July) from the record 1990/91 season. A significantly smaller 1991 crop reduced pack, down more than 25 percent in 1991/92. A large beginning inventory partially offset the smaller pack and prevented a sharper drop in 1991/92 sales. However, consumer sales (about 60 percent of total) still fell about 5 percent, while foodservice sales (40 percent) fell less-than-1 percent. Sales reductions were greatest for medium and large pitted olives. The packed-olive inventory on August 1, 1992, was estimated at 6.3 million cases (24-can/300-size case basis). This was down 25 percent from 1991 and 14 percent from 1990. The inventory drawdown will help clear the way for the larger olive crop this fall.

Figure 8

U.S. Olive Production



The smaller 1991 crop also led to increased imports of canned olives. For the 10-month period ending May 31, 1992, total U.S. olive imports were 3.06 million cases (24-can/300-size case basis), up from 1.65 million in 1990/91. Spain continues to supply the most canned olive imports to the United States with almost 90 percent of the total.

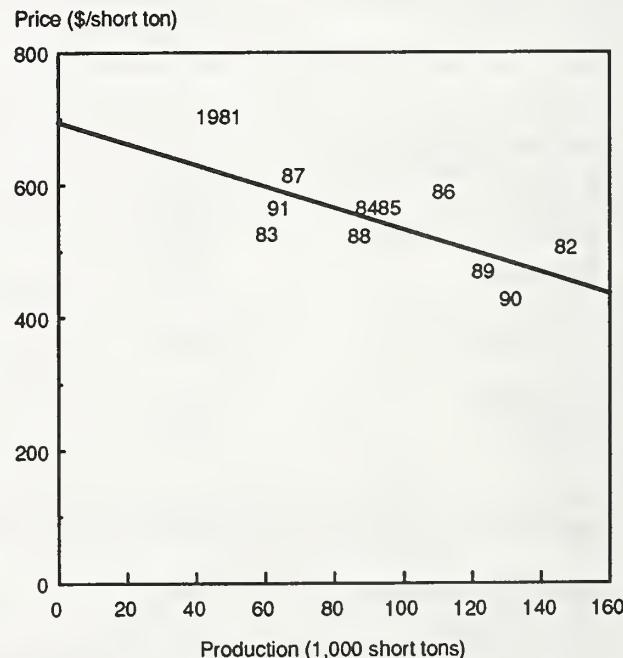
Olive Prices Lower in 1992/93

A larger 1992 olive crop will likely result in an average grower price of less than \$500 per ton, down at least 10 percent from 1991/92. Lower prices are expected for most varieties.

Long-term tree damage from the December 1990 freeze appears to be minimal in California where olive bearing acreage has been around 30,000 acres for the last 3 years. Recent increases in nonbearing acreage and the cyclical nature of olive production suggests moderate- to large-sized crops during the next several years. However, tighter water supplies in the future may reduce peak-production potential and hinder tree recovery following the 1992 bumper crop.

Figure 9

U.S. Olive Production and Season-Average Grower Price



Larger Kiwifruit Crop Expected in 1992

Increased acreage of mature vineyards and a good fruit set will likely increase the 1992 California kiwifruit crop. The recent dumping ruling on New Zealand's kiwifruit imports will likely reduce U.S. imports in 1992.

California's utilized production of kiwifruit in 1991/92 (November-October) was 28,700 short tons, down 16 percent from a year earlier. The short crop almost doubled the grower price from \$415 per ton in 1990/91 to \$824 per ton in 1991/92. Shipments in the peak month of March were off 6 percent from a year earlier. In late March 1992, the f.o.b. price of California kiwifruit was \$6.50-\$7.50 per carton (size 36), up about \$1 from a year earlier.

Although an official forecast is not available, a better fruit set, more vineyards reaching mature yields, and intensified cultural practices will likely increase 1992/93 California kiwifruit production. Also, the alternate bearing characteristic of kiwifruit suggests a larger crop following last year's small one, but production is expected to be less than the 1989 record of 40,000 tons. The industry expects the 1992 crop to have more variety in fruit size than last year. The larger crop likely will lower grower prices in 1992/93.

A significant factor affecting early-season prices in November and December is the presence of New Zealand kiwifruit in the U.S. market. A recent United States International Trade Commission (USITC) ruling will likely slow imports of New Zealand kiwifruit during the first part of the U.S. marketing season and ease the drop in prices related to the larger 1992 California crop.

New Zealand, the world's largest kiwifruit exporting country, supplies most of the U.S. off-season imports (June-November). According to the Agricultural Marketing Service, U.S. kiwifruit imports from New Zealand in June and July 1992, were 4,850 short tons down more

than 50 percent from a year earlier. The 1992 New Zealand crop is expected to be 308,644 short tons, up about 1 percent from 1991.

Kiwifruit Dumping Ruling Sets Duty Deposit on New Zealand Imports

On May 15, 1992, the USITC ruled unanimously that the U.S. kiwifruit industry was injured by the dumping of New Zealand kiwifruit during the 1990/91 season. A cash deposit equal to 98.6 percent of the invoice value is now required from New Zealand exporters, which is repaid later if the fruit is sold at, or above, fair market value (as determined by a study to be done by the Department of Commerce next year). The deposit requirement will remain in effect indefinitely and will significantly increase the cost of exporting New Zealand kiwifruit to the United States. Because of the duty deposit, imports from New Zealand could slow and U.S. kiwifruit prices could increase, especially during California's off-season (June-November).

Kiwifruit imports from Chile will likely increase in 1992 as a larger crop of 63,492 short tons is expected there, up 50 percent from 1991. Almost all Chilean kiwifruit production is exported. Because only 10-15 percent of Chile's kiwifruit acreage is producing at mature yields, the industry expects increasing production in the next 5 years. Because both Chile and New Zealand are in the Southern Hemisphere, increased U.S. imports from Chile could partially offset reductions in U.S. imports from New Zealand. In 1991, the United States imported about eight times as much kiwifruit from New Zealand as Chile.

Table 12-Kiwifruit: Acreage, production, season-average grower price, and value, California, 1985-91

Year	Bearing acreage	Production	Prices	Value
				1,000 dollars
	Acres	Short tons	Dollars/ton	
1985	4,800	22,000	813.00	16,667
1986	5,600	24,300	1,030.00	24,102
1987	6,800	29,000	710.00	18,886
1988	7,100	32,700	760.00	22,420
1989	7,200	40,000	400.00	14,800
1990	7,300	39,000	415.00	14,110
1991	7,200	32,000	824.00	23,649

Source: National Agricultural Statistics Service, USDA.

Consumption of Three Major Tropical Fresh Fruits Tripled from 1970 to 1990

Florida mango production in 1992 will likely be down from the prior year, but production and consumption is trending up. Pineapple and papaya production in Hawaii face competition for land and labor resources and foreign suppliers.

Per capita consumption of fresh fruit increased from 80 pounds in 1970 to about 100 pounds in the late 1980's. Tropical fruit consumption, especially of mangoes and pineapples, has been among the fastest growing. Per capita consumption of fresh mangoes, pineapples, and papayas increased from less than 1 pound in 1970 to 2.8 pounds in 1990. Higher imports, rather than increased U.S. production, have been primarily responsible for increased tropical fruit supplies.

The increase in U.S. mango consumption in the last two decades was mostly supplied by imports from Mexico and Caribbean countries. These shipments arrive from February through November, but the heaviest months are April through August. The imports compete directly with Florida's May-July harvest season. Tropical fruit consumption has also increased as prices have declined relative to most other major fresh fruits, especially in the last 10 years.

Florida Mango Production Likely Down in 1992

Mango production in Florida, the only State with commercial production, increased from 4,070 short tons in 1970 to 13,750 in 1991. However, Florida accounts for only about 5 percent of U.S. mango consumption, with the balance being imported. Although no official USDA forecast is available, Florida's 1992 mango production is expected to be down from last year's bumper crop. An early bloom was knocked back by cold temperatures, reducing both total production and fruit quality. In 1991, the average grower price was \$12.30 per 55-pound bushel, down 9 percent from 1990.

In Mexico, heavy rains in early 1992 damaged most early-season mango varieties (especially Kent), reduced mango exports through mid-June, and raised f.o.b. border prices about 15 percent. At the end of June, total 1992 imports were down 15 percent. However, seasonal shipments gained momentum in July with increased shipments of Tommy Atkins, a variety that was not adversely affected by the early-season poor weather. Although no reliable statistics on Mexican mango acreage are available, the

industry reports that planted acreage continues to grow, but at a slower rate than in the past. A smaller 1992 crop in Florida and lower imports through June likely will raise the 1992-season-average grower price for Florida mangoes.

U.S. Pineapple Production Continues To Slide

Hawaii produces about half of the U.S. fresh pineapple supply, while imports make up the balance. In the early 1980's, Mexico supplied more than one-half of U.S. pineapple imports, but duty-free status (established in the Caribbean Basin Initiative in 1983) helped increase imports from Costa Rica, the Dominican Republic, and Honduras. Imports from these countries are now about 44, 28, and 22 percent, respectively, of total U.S. pineapple imports.

Future increases in U.S. fresh pineapple production appear to be unlikely. Hawaiian production declined for the fourth consecutive year in 1991. Total pineapple production has slipped 5 percent per year since 1987, mostly because of declining acreage. Conversion of land to nonagricultural uses, labor-supply problems, and increased foreign competition for fresh and processed pineapples has resulted in a decline in Hawaiian pineapple-crop acreage from 36,100 acres in 1987 to 28,400 in 1991. As production declined, the average grower price for fresh pineapples increased from \$365 per ton in 1987 to \$415 in 1991. However, it is unlikely that higher pineapple prices in the future will induce more pineapple production.

Papaya Production Down in 1991

Hawaiian papaya production totaled 27,700 short tons in 1991, down 19 percent from 1990. Cold temperatures, heavy rains, gusty winds, and generally wet conditions slowed fruit development. Also, some diseased trees were removed due to the spread of phytophthora, a fungus disease that attacks the roots. In 1992, better weather conditions have increased output. Fresh Hawaiian papaya sales from January through June were 28 percent higher than in the previous year.

Cultivated Blueberry Production Down, Wild Blueberry Production Up in 1992

Spring freezes in key blueberry-producing States reduced cultivated blueberry production by 15 percent in 1992. However, the U.S. wild blueberry crop, which is mostly processed, is expected to be up 53 percent.

Fresh-Market Blueberry Crop Down in 1992

Smaller blueberry crops in 1992 were forecast for the top three cultivated-blueberry-producing States. Spring freezes cut North Carolina blueberry production, which was estimated at 4,500 short tons, down 22 percent from 1991. F.o.b. prices for blueberries in North Carolina were \$12-14 per twelve 1-pint flat in June, up about \$1 from a year earlier. North Carolina supplies about 20 percent of the fresh-blueberry market and typically ships in May and June. The New Jersey blueberry crop is estimated at 11,000 tons, down 45 percent from last year and the smallest in almost 20 years.

Michigan, the largest cultivated-blueberry-producing State, contributing about one-third of the total U.S. supply, markets blueberries from July to September. Spring freezes reduced the 1992 crop to 18,000 tons, down 29 percent from 1991. Cool June weather delayed maturity and created an early-July gap in blueberry availability. When the supply increased in late July, prices moderated but were still ahead of a year earlier. Shorter fresh blueberry supplies will keep fresh blueberry prices higher than last year.

Larger Processed-Blueberry Crop Expected in Maine in 1992, but Smaller Michigan Crop May Keep Processed Prices Strong

Maine's 1992 wild-blueberry crop is expected to increase more than 50 percent, as production bounces back from the freeze-reduced 1991 crop. But because smaller production in Canada's eastern provinces is expected, total North American wild-blueberry production will be up only 7 percent.

The processed-blueberry market is dominated by wild blueberries from Maine (about 57 percent of U.S. total in 1990, but only 37 percent in 1991) and cultivated berries from Michigan (about 29 percent of the total in 1990, and 36 percent in 1991). In 1992, the smaller Michigan crop

Table 13--North American blueberry production, 1991-92

State or Province	1991	1992 1/ 1,000 short tons
Cultivated:		
Michigan	25.5	18.0
New Jersey	20.0	11.0
British Columbia	6.5	9.5
North Carolina	5.8	4.5
Washington	2.3	3.8
Oregon	4.4	6.5
Indiana	1.9	1.0
Georgia	2.6	3.5
Arkansas and others	3.3	3.6
Total	72.1	61.4
Wild:		
Maine	19.7	30.0
Nova Scotia	14.0	12.5
Quebec	11.3	6.0
New Brunswick	4.3	4.0
Newfoundland	1.8	1.8
Prince Edward Island	0.8	0.8
Total	51.6	55.0

1/ Estimate.

Source: Michigan Frozen Food Packers Association and the North American Blueberry Council.

will reduce total U.S. processing-blueberry supplies. More than half of Michigan's blueberry crop is processed. The combined crop shortfalls of processing blueberries in Michigan and in Canada's will offset gains in Maine, leaving total processing-blueberry supplies about the same as in 1991.

Stocks of frozen blueberries on June 30, 1992, were 13,794 tons, down 4 percent from a year earlier. Lower production and beginning stocks, combined with lower stocks of most other frozen fruit, suggest that processing prices will remain near the relatively high levels of 1991/92. Frozen-blueberry prices averaged about 81 cents per pound (30-pound cartons, f.o.b. Michigan), in 1991/92 (August-July), up from about 72 cents from a year earlier.

Strawberry Production Up From 1991 Record

A warm spring increased California fresh and processed strawberry deliveries in April and May. Prices were lower than last year for fresh and processed strawberries, but rebounded in June and July as shipments eased.

Strawberry production in the major States in the 1991/92 winter and spring seasons totaled 665,600 short tons, up 1 percent from last year and up 11 percent from 1990. California spring strawberry production is expected to total 552,000 tons, 1 percent more than the 1991 record. Production in Washington and Louisiana was forecast to increase. Frost in Michigan from May 24 to May 27 caused significant damage, and dry weather and pest problems lowered yields in Oregon.

Fresh Strawberry Prices Drop in Spring, but Rebound in June

The absence of a major winter freeze and warm spring weather got the California strawberry season off to a fast start in 1992, with higher shipments and lower prices in April compared with the 1991 crop. Large spring shipments pressured grower prices which were down about 15 percent from 1991 in April and May. California fresh-strawberry-season shipments from January through mid-May were almost 20 percent above last year and f.o.b. prices were lower.

After the April/May peak, fresh shipments slowed and prices firmed. The June 1992 grower price was \$1,306 per ton, up from \$822 in May and almost twice the June 1991 price. The retail price for fresh strawberries advanced to \$1.05 per pound, up from 83 cents in May. Higher summer and early-fall fresh-strawberry prices may be enough to raise the season-average grower price for fresh strawberries above last year's \$1,102 per ton.

Fresh Strawberry Exports Advance, Fresh and Frozen Imports Decline in Early-1992

Larger supplies of strawberries, available earlier than normal in the season, increased fresh strawberry exports. Exports from January to May 1992 were 27,865 short tons, up 25 percent from a year earlier. The primary export market is Canada, which takes over 90 percent of total exports. Imports of fresh and frozen strawberries in the same period were down 24 and 15 percent, respectively. Poor growing and harvesting conditions in some producing regions in Mexico reduced its supply of fresh and frozen strawberries.

California Strawberry-Processing Prices Increase After Early-Season Lows

Weak fresh-strawberry prices in April encouraged growers to deliver their berries to processors earlier than usual.

Also, February rains damaged fresh strawberry production in the southern California district and forced growers to stepup deliveries to processors. By May 9, year-to-date deliveries were more than double the year-earlier level. Frozen strawberry stocks on May 31 were 122,472 tons, up 27 percent from May 1991.

On May 11, 1992, the Processing Strawberry Advisory Board reported that May 1992 field prices for California processing strawberries averaged \$400 per ton, down from \$540 in May 1991 and the lowest since 1984. California grower prices for processing strawberries actually averaged

Figure 10
U.S. Grower Prices for Fresh Strawberries

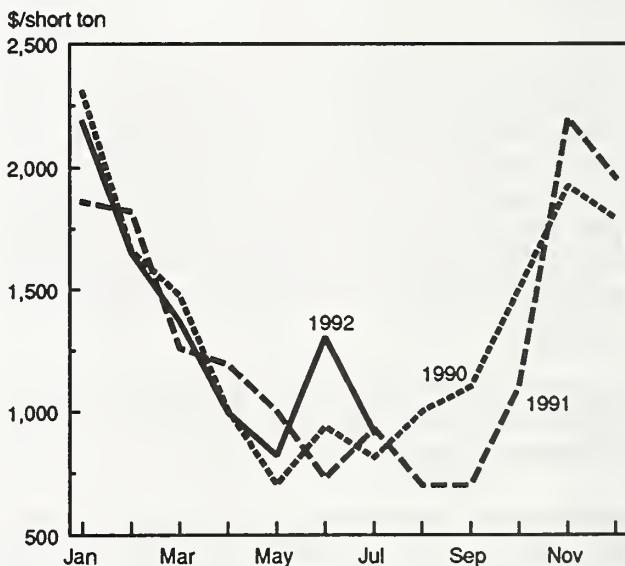


Table 14--Strawberry deliveries for processing, 1991 and 1992

State	1991	1992
1,000 short tons		
California--		
Freezing	146.1	1/ 104.9
Juice	20.5	1/ 21.0
Oregon--		
All processing	27.0	17.3
Washington--		
All processing	2.7	3.6
Total	196.3	146.8

1/ ERS forecast.

Source: Federal-State Market News.

about \$460 per ton in 1991, down from \$500 in 1990. When the 1992 strawberry crop appeared to be smaller than the first forecast, processors raised cash prices to \$520-600 per ton in July. Frozen strawberry stocks were quite high, totaling 147,579 tons on June 30, 1992, up more than 8 percent from a year earlier.

Although 1992 strawberry acreage in Oregon was forecast up 9 percent from 1991, root rot and root weevils reduced

1992 production and, consequently, deliveries to processors by 36 percent. Oregon accounts for about 15 percent of U.S. processed strawberries, in second place behind California, the largest supplier. Washington processed-berry deliveries in 1992 were up about 30 percent from a year earlier. Washington ranks as the third largest supplier with about 2 percent of total U.S. processed-strawberry production.

Table 15-Strawberries: Acreage, yield per acre, and production for major States, 1990, 1991, and indicated 1992 production 1/

Crop and State	Acreage			Yield per acre			Production		
	1990	1991	1992	1990	1991	1992	1990	1991	1992
-- Acres harvested --				-- Short tons --			-- 1,000 short tons --		
Early:									
Florida	5,300	5,500	4,700	11.0	12.0	14.0	58.3	66.0	65.8
Late:									
California	21,000	21,100	23,000	23.5	26.0	24.0	493.5	548.6	552.0
Louisiana	750	850	1,000	3.9	3.3	6.0	3.0	2.8	6.0
Michigan	2,200	2,100	2,100	3.3	3.1	2.5	7.2	6.5	5.3
New Jersey	500	500	500	2.1	1.9	1.9	1.1	1.0	1.0
Oregon	5,700	5,600	6,000	5.8	5.5	5.0	32.8	30.8	30.0
Washington	1,800	1,400	1,600	3.5	3.0	3.5	6.3	4.2	5.6
Group total	31,950	31,550	34,200	17.0	18.8	17.6	543.8	593.8	599.8
Major State total	37,250	37,050	38,900	16.2	17.8	17.1	602.1	659.8	665.6

1/ Includes fresh market and processing. Production forecasts for States other than California and Florida will be available in September.

Source: National Agricultural Statistics Service and Economic Research Service, USDA.

Cranberry Crop Down From 1991 Record

U.S. cranberry production is expected to total 209,600 short tons in 1992, down 1 percent from the record 1991 crop.

1992 Cranberry Production Down 1 Percent

The 1992 cranberry crop is forecast at 209,500 short tons, down 1 percent from last year's record, but still the second largest crop on record. In Massachusetts, the leading cranberry-producing State, production is expected to be 95,000 tons, down 4 percent from 1991. Prospects are good despite this year's cool spring that resulted in a long bloom period and an uneven set. A series of frosts from the first of April until mid-May hit scattered areas throughout the growing region. Most areas experienced adequate rainfall.

The cranberry crop in Wisconsin, the second leading cranberry-producing State, is forecast at 75,950 tons, up 1 percent from 1991. The western part of the State had an extremely mild winter, with virtually no frost damage. New Jersey's cranberry crop is forecast at 17,900 tons, down 9 percent from 1991 because of May frost.

Production in Washington is forecast at 8,000 tons, up 1 percent from 1991, while Oregon is expecting a 26 percent larger crop. The mild winter and warm spring extended the growing season and was excellent for bloom and fruit development. Sufficient water for irrigation and harvest is a concern.

Grower Prices Expected To Be Stable in 1992

A near-record U.S. cranberry crop will likely match the growing domestic and export demand for processed cranberry products. Because the 1992 crop is about the same size as last year and beginning raw-product inventories are

manageable, the average grower price in 1992 likely will be similar to 1991.

The average grower price for cranberries does not fluctuate much because most of the production is contracted, typically for 3 years. Grower cooperatives, the primary marketers of cranberries and cranberry products, have maintained a relatively stable grower price the last 5 years, usually within \$3 of the average of \$90 per ton. The maximum year-to-year price fluctuation during this period

Figure 11

U.S. Production and Utilization of Cranberries

1,000 short tons

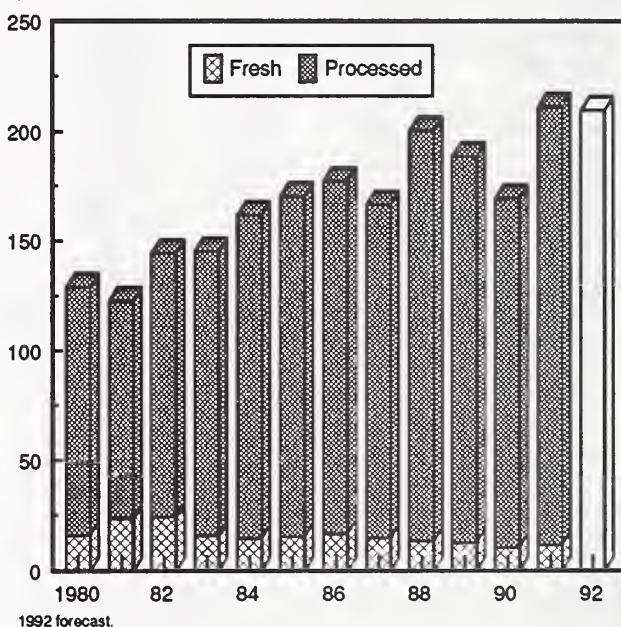


Table 16--Cranberries: Total production and season-average price received by growers, 1990, 1991, and indicated 1992 production

States	Production			Price per short tons 1/	
	1990	1991	1992	1990	1991
	-- 1,000 short tons --			-- Dollars --	
Massachusetts	65.9	98.8	95.0	952	998
New Jersey	16.2	16.4	17.9	900	950
Oregon	10.5	10.2	12.8	896	946
Washington	7.8	7.9	8.0	896	946
Wisconsin	69.3	77.8	76.0	906	972
United States	169.6	211.1	209.7	922	980

1/ Equivalent returns at first delivery point, screened basis of utilized production.

Source: National Agricultural Statistics Service and Economic Research Service, USDA.

was about 5 percent, while the maximum change in production was more than 20 percent.

More than 90 percent of the U.S. cranberry crop is processed, mostly into juice that is either sold as a juice cocktail or as a fruit-juice blend. Processed cranberry utilization has increased in absolute volume and relative to fresh-market use because profit margins for processed products are greater than those for the fresh market. In 1991, lower cranberry quality reduced shelf life and led to a shortage of fresh cranberries during December. Despite the record-large 1991 crop, fresh cranberry supplies were small and December prices were relatively high. The industry reports that processors may increase 1992 fresh-market prices to encourage growers to deliver more fresh cranberries in 1992.

A major cranberry processor reports that domestic demand for cranberry juice products is increasing 2 percent each year. The industry also reports increased demand in the last 2 years for other cranberry products, like sweetened dried cranberries used in breakfast cereals and frozen cranberries used in frozen desserts.

The large 1991 crop increased supplies available for export, which are shipped mostly in the form of juice concentrate. Canada, the United Kingdom, Germany, and Belgium are important U.S. cranberry export markets. Growth potential is limited in the highly competitive juice markets in Western Europe and Japan. According to USDA's Foreign Agricultural Service, Mexico may become a high-growth market because of rising incomes and a geographically concentrated, middle-class market.

Wetlands Issue Limits Domestic Acreage Growth in the 1990's, but Higher Yields Increase Production

Urbanization and restrictions on the use of wetlands for agriculture are pressuring expansion of domestic cranberry acreage, especially in Massachusetts. However, increasing acreage in Wisconsin will likely increase total U.S. production in the next several years. Also, improved pesticides and better water- and fertilizer-management techniques increased yields about 15 percent in the last 10 years.

U.S. Orange Production Up 13 Percent in 1991/92

California's 1991/92 orange crop will be more than double the freeze-reduced 1990/91 crop, while Florida's production decreased. As shipments rose to normal levels, prices of fresh-market oranges plummeted.

California Prospects Improve

California oranges have been even more plentiful this season than was expected before the navel orange harvest began in November 1991. USDA's first forecast placed 1991/92 California orange production at 2.0 million short tons, but winter rains and mild temperatures increased the crop potential. The July 1992 forecast was 2.5 million tons, 25 percent higher than the October 1991 forecast.

California's 1991/92 orange crop is expected to be nearly 160 percent larger than the freeze-damaged 1990/91 crop. Navel-orange output was 1.31 million tons, more than double last season's output of 593,000 tons. But the 1991/92 California navel crop was 21 percent smaller than the record-large 1989/90 crop.

The 1991/92 Valencia orange crop is expected to be the second largest on record, three times the 1990/91 crop, and 14 percent larger than in 1989/90. Harvest of California Valencia oranges continues through fall, with 53 percent of the crop remaining to be harvested on July 30, 1992. USDA's July forecast of 1991/92 California Valencia production was 1.16 million tons.

Fresh Orange Prices Plummet

Increased production brought fresh orange prices down sharply from the record highs of the 1990/91 season when fresh-market oranges were scarce. After the 1990 Christmas freeze, grower prices (on-tree-equivalent returns) for fresh California oranges were above \$25 per 75-pound box until December 1991, when the average price fell to \$13.86 a box. As the 1991/92 harvest progressed and production prospects increased, California prices continued to drop, averaging \$6.56 in June and \$4.84 in July 1992.

Consumers have had access to more good-quality oranges at lower cost, as California's 1991/92 orange production rebounded from the December 1990 freeze. In the years before the freeze, California provided about 80 percent of all U.S.-produced fresh-market oranges. The shortage of California oranges drove the average retail price for navel oranges to 93 cents a pound by February 1991, when marketings of the short crop were essentially complete. This season, navel prices started at 73 cents a pound in November 1991, fell to a low of 54 cents in April 1992, and averaged 57 cents a pound in June.

California's Orange Shipments Start Slowly

California navel oranges matured later than usual and, until March 1992, monthly domestic shipments lagged the previous two nonfreeze seasons. In November and December 1991, less than 200,000 short tons of fresh oranges were shipped from California and Arizona districts, the smallest volume in four seasons. However, total season-to-date (November-June) shipments reached 943,000 tons, compared to only 390,000 tons of the freeze-reduced 1990/91 crop and 1.1 million tons during the 1988/89 and 1989/90 seasons.

Despite an abundant supply of California oranges and a smaller Florida crop, Florida orange shipments did not fall to prefreeze levels. Preliminary reports show Florida's 1991/92 fresh marketings down about 10 percent from last season's 465,000 short tons. Florida's share of total domestic orange shipments is expected to be 30 percent, compared to 20 percent before the California freeze.

Florida oranges mature before California's, and more than half of Florida's season shipments typically occur before

Figure 12

California Oranges: Equivalent On-Tree Returns for Fresh Use

\$/75 lb. box

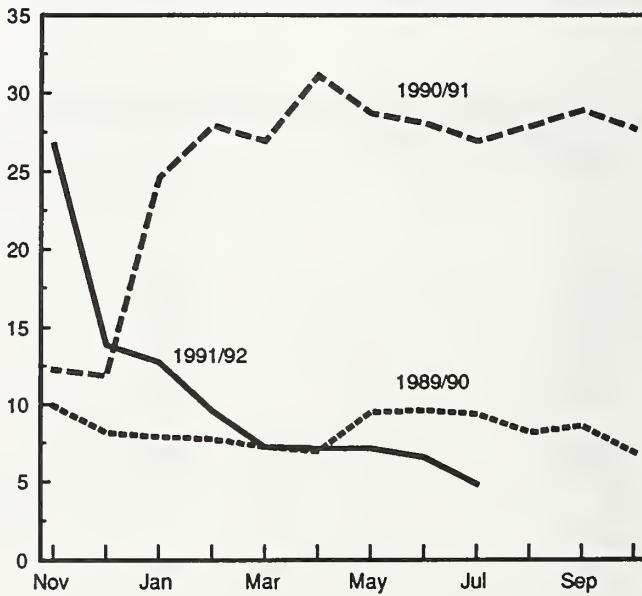
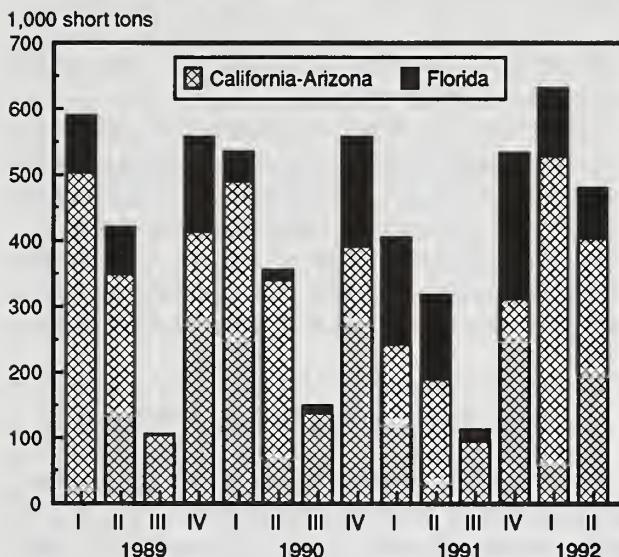
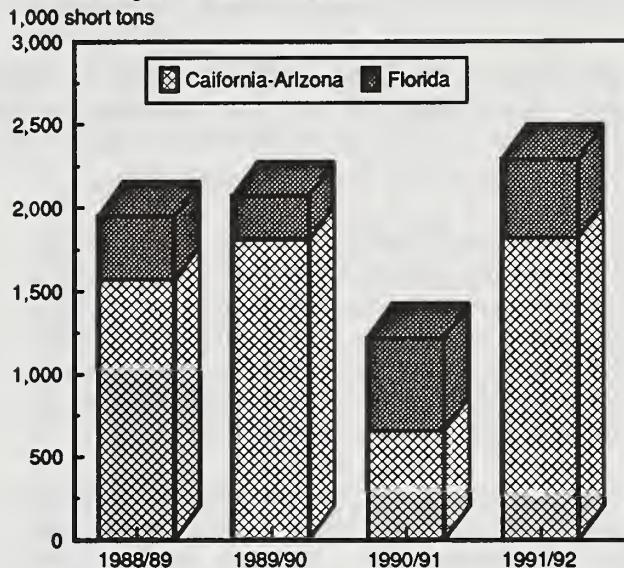


Figure 13

Domestic Orange Shipments

January. Fresh marketing of Florida oranges picked up even earlier this season and fresh utilization of Florida's early-season and midseason varieties (including navels) was up 30 percent from 1990/91. From September through December 1991, Florida orange shipments totaled about 224,000 short tons, compared to 238,000 from California and Arizona. While California-Arizona shipments increased in January-June 1992, Florida shipments declined to 175,000 tons.

Figure 14

U.S. Oranges: Fresh Utilization

Exports of fresh oranges recovered in 1991/92, along with California production, while imports declined. From November 1991 through July 1992, 314,000 short tons of California-Arizona oranges were exported, about 2 percent less than in the same period of 1989/90. Exports of the freeze-reduced 1990/91 crop totaled only about 133,000 tons from November 1990 through July 1991. U.S. imports of fresh oranges from November 1991 through May 1992 totaled 11,022 short tons, compared to 57,261 during the same months in 1990/91.

Florida Produces Fewer Processing Oranges in 1991/92

High juice yields kept Florida's 1991/92 orange juice production near last season, but weak demand and plentiful Brazilian supplies put downward pressure on prices.

Florida Orange Crop 8 Percent Smaller

The Florida orange production outlook increased as the 1991/92 season progressed, from an initial forecast of 6.12 million short tons in October 1991 to the final forecast of 6.29 million tons in July 1992. However, Florida's 1991/92 orange crop remained 8 percent smaller than the 1990/91 crop, with Valencia oranges down 12 percent and early-season and midseason varieties down 5 percent.

USDA's July forecast of Florida Valencia production (2.54 million short tons) was 1 percent higher than the first forecast in October 1991. Florida's July production forecast of 1991/92 production of early-season and midseason oranges was 3.75 million tons, about 4 percent more than the October 1991 forecast. Although the fruit-count-per-tree was down from the 1990/91 record, plentiful rainfall and mild temperatures contributed to the development of large oranges with high juice content.

Higher Orange Juice Yields

The Florida Citrus Processors Association reported a 7 percent higher all-orange juice yield, from an average of 1.454 gallons per box (at 42 degrees Brix) in 1990/91 to 1.548 gallons in 1991/92. Yields for Valencia oranges reached an all-time high, averaging 1.696 gallons. Higher juice yields partially offset the 8 percent smaller crop, leaving Florida orange juice production down only 1-2

percent in 1991/92. Although Florida usually provides 90 percent of U.S.-produced orange juice, increased processing of citrus produced in other States will bring U.S. orange juice production up almost 3 percent from 1990/91. Processed utilization of California-Arizona oranges was up nearly 80 percent from last season according to industry reports.

Prices Mixed for Processing Oranges and FCOJ

Because 90-95 percent of U.S. oranges used for processing are from Florida, a smaller Florida crop would seem to signal higher prices for processing oranges. However, weak consumer demand, as shown by lower retail sales, put a damper on prices received by Florida growers.

Monthly on-tree prices for Florida processing oranges were below a year earlier for most of the 1991/92 season. In December 1991, processing-orange prices averaged \$4.65 per 90-pound box, compared to \$5.50 the prior year. Prices rose as the season progressed, especially when later-maturing Valencia oranges (with high juice content) were harvested. Near the end of the season, May prices averaged \$7.55 a box, 50 cents higher than in the prior year.

Prices of frozen concentrate orange juice (FCOJ) dropped throughout the 1991/92 season as the juice production outlook improved for Florida and Brazil. In September

Figure 15

U.S. Oranges: Processed Utilization

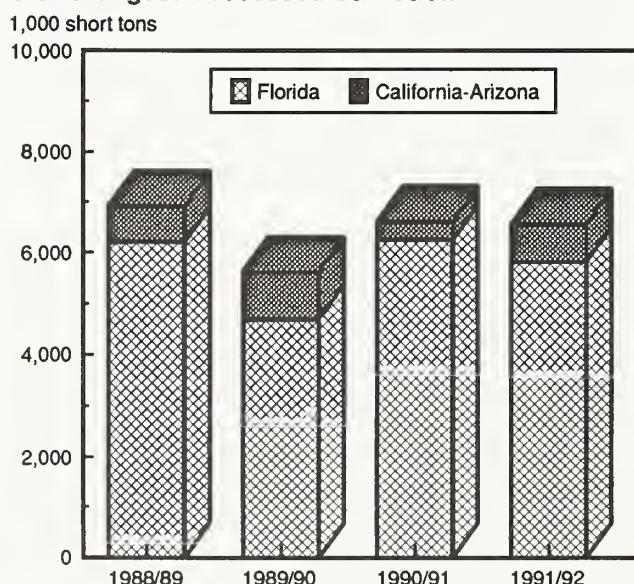
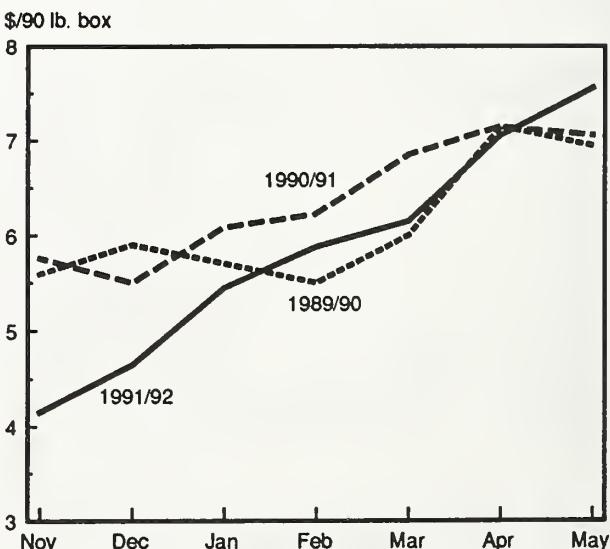


Figure 16

Florida Oranges: Equivalent On-Tree Returns for Processed Use



1991, prices of nearby futures contracts averaged \$1.20 per pound solids. After USDA forecast a smaller-than-expected 1991/92 Florida orange crop in October, FCOJ futures prices rose to a season high of \$1.75 per pound by the first week of November. Prices have gone down each month since the Florida processing season began in December 1991 and dropped to \$1.38 in April. In July, nearby futures prices averaged \$1.19. Prices are unlikely to rebound unless Brazilian production falls short of expectations.

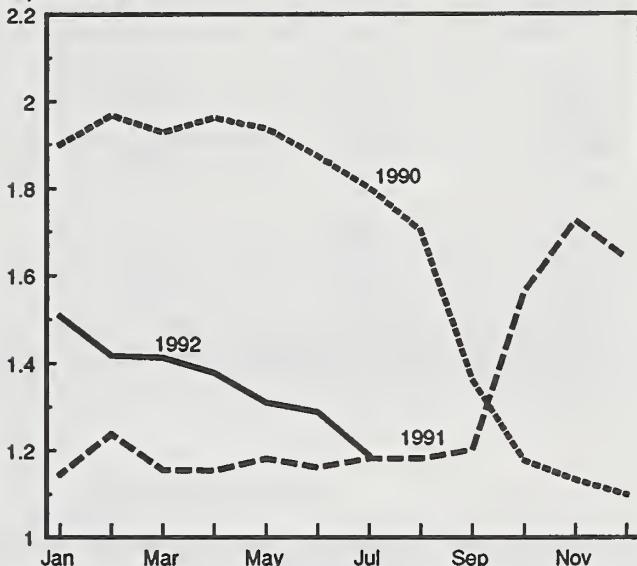
Bumper 1992 Orange Crop in Brazil

In April, Brazil's 1992/93 orange crop was forecast to be about 8 percent larger than in 1991/92. However, FCOJ output is projected up only 2 percent in 1992/93 (July-June), on the assumption of lower juice yields. Nevertheless, Brazil's 1992/93 FCOJ production is likely to be the second largest in 10 years. Brazil exports almost all the FCOJ it produces and leads the world in orange production and orange juice exports.

About half of Brazil's 1991/92 FCOJ exports went to European countries, while the United States accounted for 35-40 percent. Although U.S. FCOJ imports vary considerably, depending on domestic production, Brazil has supplied nearly 85 percent of U.S. FCOJ imports in the past two seasons, with Mexico accounting for about 10 percent.

Figure 17
Orange Juice Futures Price

\$/pound solids



During the first 6 months of Florida's 1991/92 FCOJ season (December-May), U.S. imports were down 6 percent from the same period in 1990/91. However, U.S. imports of Brazilian FCOJ are usually used to supplement U.S. production, increasing in the fall when new crop supplies from Brazil are plentiful. U.S. imports of FCOJ are likely to be down 3 percent for the entire 1991/92 season.

Table 17--United States: Orange juice supply and utilization, 1985/86-1991/92

Season 1/	Beginning stocks	Production	Imports	Exports	Domestic consumption	Ending stocks 2/
Million SSE gallons 3/						
1985/86	249	684	546	71	1,205	204
1986/87	204	783	556	73	1,268	201
1987/88	201	910	412	90	1,221	212
1988/89	212	973	382	98	1,236	232
1989/90	232	652	492	90	1,061	225
1990/91	225	888	327	96	1,186	158
1991/92 4/	158	914	316	98	1,132	158

1/ Season begins in December of the first year shown. 2/ Data may not add due to rounding. 3/ SSE = Single-strength equivalent. SSE gallons times 0.2476 equals 42 degree Brix gallons, times 0.0029 equals 65-degree-Brix metric tons. 4/ Forecast August 1992.

Source: Foreign Agricultural Service, USDA.

Table 18--Brazilian orange juice: Supply and utilization, 1985/86-1992/93

Season 1/	Beginning stocks	Production	Exports	Domestic consumption	Ending stocks 2/
Million SSE gallons 3/					
1985/86	62	1,230	987	21	284
1986/87	284	848	983	28	121
1987/88	121	998	1,038	28	53
1988/89	53	1,002	994	28	34
1989/90	34	1,476	1,348	28	134
1990/91	134	1,213	1,142	28	177
1991/92	177	1,272	1,300	28	121
1992/93 4/	121	1,300	1,265	28	128

1/ Season begins in July of the first year shown. 2/ Data may not add due to rounding. 3/ SSE = Single-strength equivalent. SSE gallons times 0.2476 equals 42-degree-Brix gallons, times 0.0029 equals 65 degree Brix metric tons. 4/ Forecast August 1992.

Source: Foreign Agricultural Service, USDA.

Grapefruit Production Dips in 1991/92

Despite a 6 percent smaller Florida crop, U.S. grapefruit production is expected to be down only 2 percent in 1991/92, due to a record-large California crop.

More Colored Than White Grapefruit

Florida's 1991/92 output of seedless white grapefruit was down 12 percent from last season to 812,000 short tons, while colored varieties were nearly unchanged at 939,000 tons. Florida's 1991/92 seedy grapefruit crop was the smallest in many years, dropping 25 percent from 1990/91 to 51,000 tons.

The number of bearing-age colored-grapefruit trees increased nearly 10 percent in 1991/92 from the prior season. For all Florida grapefruit, the fruit count per tree was lower, but fruit size was larger than in the last two seasons due to a combination of mild winter temperatures and good growing-season conditions.

California grapefruit production is projected to increase 26 percent from 1990/91, reaching 330,000 short tons, 6 percent larger than the 1989/90 record high. Production in California's "desert areas" was the same as for the past three seasons, 112,000 short tons. Production in "other areas" of California in 1991/92 is expected to be a record-high 218,000 tons, up 45 percent from 1990/91.

Florida Shipments Finish Early

Domestic and export shipments accounted for 54 percent of Florida's 1991/92 grapefruit crop, the same proportion as in 1990/91. Because of a smaller 1991/92 crop, domestic shipments finished early. In April-May 1992, about 40,000 short tons were shipped, compared to 75,000 in 1991 and nearly 100,000 in 1989. Only about 8,000 tons of the freeze-reduced 1989/90 crop were shipped during April-May 1990.

Early-season Florida grapefruit shipments (September-December 1991) outpaced the previous year by nearly 10 percent. But the season wound down early and total shipments (September-May) stood at about 530,000 short tons, 3 percent less than at the same time in 1990/91. Exports, which accounted for 20-25 percent of Florida's 1991/92 grapefruit crop, were also about 3 percent behind last season.

Florida Grapefruit Prices Mixed

Florida fresh grapefruit prices (on-tree-equivalent returns) were below year-earlier prices during most of the 1991/92 harvest months. From October 1991 to April 1992 only December and April prices were higher than the year before. Retail prices of fresh grapefruit averaged 56 cents

a pound in January-June 1992, compared to 62 cents in 1991 and 66 cents in 1990.

Prices were much higher for Florida processing grapefruit. Stocks of grapefruit juice were down 30 percent when the 1991/92 season began, and monthly prices paid to growers for processing grapefruit have been double 1990/91 prices. From January through March 1992, processing prices were higher than in the same period in the previous three seasons.

Figure 18
U.S. Grapefruit Production

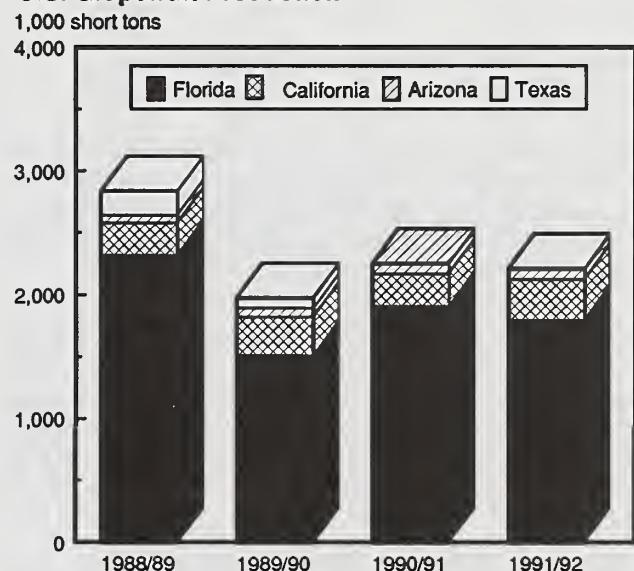
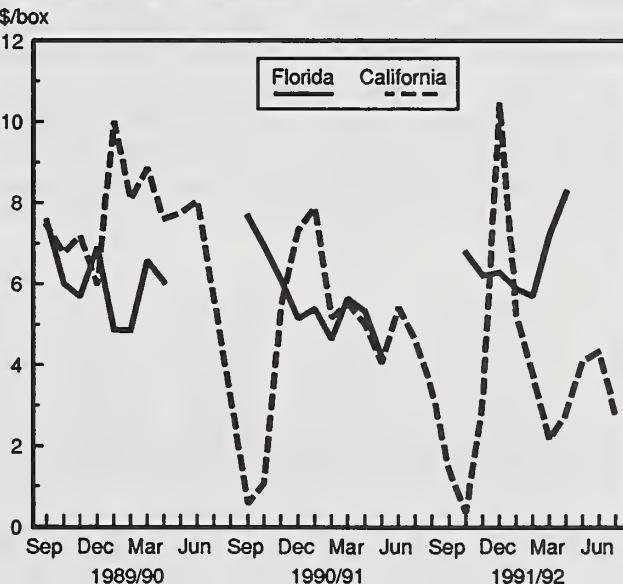


Figure 19
All Grapefruit: Equivalent On-Tree Returns
\$/box



Almond Crop Up 12 Percent, Walnut Crop Down 15 Percent

Moderate gains in tree nut production, lower carryin stocks, and strong demand will likely strengthen grower prices in 1992/93.

The U.S. supply of tree nuts (almonds, walnuts, pecans, pistachios, hazelnuts, and macadamia nuts), including imported tree nuts, is estimated at 1.42 billion pounds (shelled basis), during the 1991/92 marketing season, down 5 percent from the record set a year earlier. Total marketable production for the six major tree nut crops was 850 million pounds, down 12 percent from 1990/91. Smaller crops of almonds, pistachios, and pecans reduced the 1991/92 total supply. Higher prices for almonds, pistachios, and walnuts increased the total value of production to a record \$1.28 billion in 1991/92.

Lower Beginning Stocks Will Moderate Total 1992/93 Tree-Nut Supplies

The beginning-stock estimate of total tree nuts for the 1992/93 marketing season is 265 million pounds, down one-third from last year. Carryin stocks for almonds and pistachios are smaller than last year, while stocks for all other tree nuts are slightly higher.

Estimates of the 1992/93 total tree-nut supply will be available in September. A smaller total nut carryin, a smaller walnut crop, a smaller-than-expected almond crop, and expectations for a smaller pecan harvest will likely reduce total tree-nut supplies from near-record supplies of 1.42 billion pounds in 1991/92.

Almond Crop Smaller Than Expected in 1992

USDA's final forecast for 1992 California almond production was 275,000 short tons (shelled basis), down 4 percent from the June 1 forecast, but up 12 percent from last year. The industry expected an even larger crop, but cool weather and fog hampered pollination, reducing production potential. Warm early-season weather moved crop maturity about 2 weeks ahead of last year. The total nut set was higher than last year. Trees in the southern Central Valley showed a lighter nut set than in the

northern part. This year's almond quality may be reduced because a larger-than-normal number of harmful insects that appeared early in the growing season.

Estimated beginning stocks for the 1992/93 season are lower than a year earlier because of last season's "off-year" production and good movement during the 1991/92 marketing season. The Almond Board of California placed 10 percent of 1991 production into reserve, but it was released during the 1991/92 season.

Smaller 1992 Walnut Crop and Strong Demand Expected To Maintain Grower Prices

The economic slowdown in North America and Europe did not reduce U.S. domestic and export walnut shipments in 1991/92. Some customers switched from pecans to walnuts in 1991/92 because of higher priced and lower quality pecans. Despite record walnut supplies, excellent walnut quality helped push the 1991/92-season-average grower price for walnuts to \$1,080 per ton, up 4 percent from a year earlier when production was down 14 percent. The higher production and price brought the value of production to a record \$229.7 million in 1991/92.

The July 1 forecast for 1992 California walnut production was 220,000 tons (in-shell basis), 15 percent less than last year's record. An uneven bloom and the alternate-year bearing characteristic of some varieties are the primary reasons for the smaller crop. However, mild weather in June and July aided nut development.

The industry expects another good-quality walnut crop in 1992. As with most other California tree nuts, walnut maturity is about 2 weeks ahead of last year. Lower 1992 walnut production will reduce the 1992/93 supply from last year's record. Lower production, good quality, and strong domestic demand should keep the U.S.-average grower price in 1992/93 near last year's level.

Table 19--Tree nuts: Supply and utilization, by commodity and marketing year, 1987/88-1991/92 forecast

Commodity	Marketing year 1/	Production	Imports	Beginning stocks	Market reserve	Total supply	Ending stocks 2/	Domestic consumption		
								Exports	Total	Per capita Pounds
--1,000 pounds (shelled) --										
Almonds	1987/88	634,560	650	86,290	114,220	721,500	237,560	343,300	140,640	0.58
	1988/89	564,540	480	237,560	141,130	802,580	276,910	363,970	161,700	0.66
	1989/90	457,170	70	276,910	0	734,150	214,400	342,380	177,370	0.71
	1990/91	615,752	83	214,400	44,100	830,235	277,714	359,950	192,571	0.77
	1991/92 f	461,631	156	277,714	0	739,501	152,938	377,879	208,684	0.82
Hazelnuts	1987/88	17,218	3,863	399	0	21,480	1,758	5,898	13,824	0.06
	1988/89	12,693	8,165	1,758	0	22,616	1,686	3,778	17,152	0.07
	1989/90	9,794	6,615	1,686	0	18,095	1,107	3,344	13,644	0.05
	1990/91	14,603	9,114	1,107	0	24,824	5,874	4,726	14,224	0.06
	1991/92 f	18,892	5,229	5,874	0	29,995	6,601	7,141	16,253	0.06
Pecans	1987/88	121,194	12,966	63,423	0	197,583	62,520	3,935	131,128	0.54
	1988/89	135,030	2,718	62,520	0	200,268	70,776	5,884	123,608	0.50
	1989/90	101,954	9,992	70,776	0	182,722	58,253	9,508	114,961	0.46
	1990/91	97,580	27,816	58,253	0	183,649	45,900	17,393	120,356	0.48
	1991/92 f	118,933	20,157	45,900	0	184,990	50,337	16,997	117,656	0.46
Walnuts	1987/88	204,292	470	28,343	0	233,105	59,954	59,243	113,908	0.47
	1988/89	169,916	184	59,954	0	230,054	48,574	60,263	121,217	0.49
	1989/90	195,594	137	48,574	0	244,305	54,352	66,896	123,057	0.49
	1990/91	180,800	96	54,352	0	235,248	48,574	63,902	122,772	0.49
	1991/92 f	210,436	65	48,574	0	259,075	48,574	73,860	136,641	0.54
Macadamias	1987/88	12,810	2,351	0	0	15,161	0	632	14,529	0.06
	1988/89	13,650	2,713	0	0	16,363	0	1,259	15,104	0.06
	1989/90	15,150	3,412	0	0	18,562	0	3,000	15,562	0.06
	1990/91	15,000	5,128	0	0	20,128	0	4,000	16,128	0.06
	1991/92 f	14,850	3,189	0	0	18,039	0	5,000	13,039	0.05
Pistachios	1987/88	14,579	2,166	15,005	0	31,750	5,487	3,469	22,794	0.09
	1988/89	44,752	854	5,487	0	51,093	14,897	6,442	29,754	0.12
	1989/90	18,029	1,018	14,897	0	33,944	10,045	2,904	20,995	0.08
	1990/91	42,285	617	10,045	0	52,947	16,848	6,840	29,259	0.12
	1991/92 f	25,432	80	16,848	0	42,360	6,600	8,249	27,511	0.11
Other Nuts 3/	1987/88	0	110,239	0	0	110,239	0	9,800	100,439	0.41
	1988/89	0	111,838	0	0	111,838	0	13,876	97,962	0.40
	1989/90	0	132,141	0	0	132,141	0	17,494	114,647	0.46
	1990/91	0	150,851	0	0	150,851	0	23,457	127,394	0.51
	1991/92 f	0	143,368	0	0	143,368	0	25,414	117,954	0.46
Total Nuts	1987/88	1,004,653	132,705	193,460	114,220	1,330,818	367,279	426,277	537,262	2.20
	1988/89	940,581	126,952	367,279	141,130	1,434,812	412,843	455,472	566,497	2.30
	1989/90	797,691	153,385	412,843	0	1,363,919	338,157	445,526	580,236	2.33
	1990/91	966,020	193,705	338,157	44,100	1,497,882	394,910	480,268	622,704	2.48
	1991/92 f	850,174	172,244	394,910	0	1,417,328	265,050	514,540	637,738	2.51

1/ Marketing season begins January 1 of first year indicated for macadamias; July 1 for almonds, hazelnuts, pecans, and other nuts; August 1 for walnuts; and September 1 for pistachios.

2/ Includes market reserve.

3/ Includes Brazil nuts, cashew nuts, pignolias (Chinese pine nuts), chestnuts, and mixed nuts.

Source: Commodity Economics Division, ERS, USDA.

Forecasting Fresh Apple Prices for Selected Months in the Marketing Season

by

John M. Love¹

Abstract: The price of fresh apples in 3 months--November, February, and May--indicate the season's overall performance. Fresh apple prices can be predicted for 3 months using 3 different variables: (1) estimated U.S. production, (2) an estimated early-season price, and (3) late-season stocks in cold storage. Estimated total apple production is used to forecast the November grower price, while the November price is used to forecast the February price. The choice to use May 1 cold storage stocks over the November price to forecast the May price is based on the potential to update the stocks' estimate as the season progresses. The forecast equations indicate that every 1-percent change in supply changes price in the opposite direction 1.01 percent for November and 0.97 percent for May.

Keywords: Apples, prices, forecasting.

Forecasting fresh-market apple prices is important for short- and long-run marketing decisions. In the short run, analysis of storing apples depends on predicting late-season prices relative to costs of storage and foregone early-season sales. An example of long-run analysis is the decision to invest in storage capacity, which depends on expected seasonal price differentials. An economically rational decision about how to market apples requires seasonal price forecasts, and these forecasts can be generated from several predictors.

November, February, and May are selected months for indicating the season's overall price performance. Most of the domestic fresh-apple consumption is supplied from the U.S. fall crop. November's fresh apple price represents market conditions at the time that U.S. apple producers must choose when to sell, how long to store, and how much to place in controlled atmosphere (CA) storage. By February, most of the regular-storage apples have been sold and CA-treated apples begin to appear on the market. As the marketing season progresses and supply diminishes, price is expected to increase. During the 1970's, each season had a May price consistently higher than November's. But in the 1980's, only four seasons showed a positive difference.

Total U.S. apple production is used to predict November's price, and quantity of fresh apples in cold storage on May 1 is used to predict May's price. Figures A-1 and A-2 illustrate the negative association between the November price and total production and the May price and May 1 stocks, respectively. The lines drawn in the figures

represent equations 1 and 2 (table A-1). To account for trends in grower price and demand, prices are deflated to 1982-equivalent dollars and production and May 1 stocks are divided by U.S. population (table A-2). Because of seasonal patterns in apple movement out of storage, apple prices for several months after harvest show a regular pattern, known as seasonality (1). For February's price, a forecast can be made using November's price as the predictor (figure A-3). The line in figure A-3 represents equation 3 in table A-1. Due to high variability in the November-May price correlation, the may price prediction is improved by using storage supplies (equation 2) rather than the November price (equation 4).

The price-forecasting equations in table A-1 are used in the following manner. The constant (in column 4) is added to the product of the slope (column 5) and the predictor. When supply is the predictor, production or storage stocks must first be divided by population. When price is the predictor, it must first be divided by the GNP deflator (1982=1.0). Finally, the resulting price predictions must be multiplied by the GNP deflator to bring 1982-constant-dollars-per-bushel back to current-dollars-per-bushel.

As an example, from equation 1 the November 1992 price (in 1982 dollars) is predicted by adding 13.33 (the constant) to the product of -0.193 (the slope) and 39.45 (10,059 million pounds estimated 1992 total apple production divided by 255 million U.S. population in 1992). The predicted \$5.68 per bushel (1982 dollars) is multiplied by 1.4 (1992 GNP deflator, 1982 = 1.0) to arrive at \$7.95 per bushel (1992 dollars) in November.

For equations 1 and 2, the coefficients on the supply variables (the slopes) can be converted to price flexibilities of -1.01 in November and -0.97 in May. The flexibilities,

¹ Agricultural Economist, Specialty Agriculture Branch, Commodity Economics Division, ERS.

estimated at the data means, are interpreted as every 1-percent change in supply causes an opposite-direction price change of 1.01 percent in November and 0.97 percent in May.

Prediction of future prices based on the equations in table A-1 introduces variability, due to uncertainty in future values of the predictors. For example, using a November price forecast (equation 1) to estimate February's price (equation 3) is likely to lower the true precision of February's forecast. Thus, the true standard error around the forecast will be larger than that estimated from historical data. However, for sensitivity analysis, forecasts can be made using a range of predictor values. Finally, a prediction can be adjusted up or down after considering the effects of international trade, processor demand, and other factors excluded from the forecast equations.

In summary, apple prices in 3 selected months are predictable using three different variables: estimated annual production for November's price, November's price for February's price, and May 1 storage stocks for May's price. Forecasting prices with seasonality models is an economical procedure, as it only requires the early-season price to get the remaining months in a season. However, the method of obtaining a starting value has implications for the true precision of subsequent forecasts. Also, the seasonality model is less satisfactory for May than for February because of the longer period after harvest. A forecast for May, using projected May stocks, allows the analyst an opportunity to update the prediction by updating the stocks estimate as the season progresses.

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Figure A-1
U.S. Apples: Per Capita Total Production and November Fresh-Market Grower Price

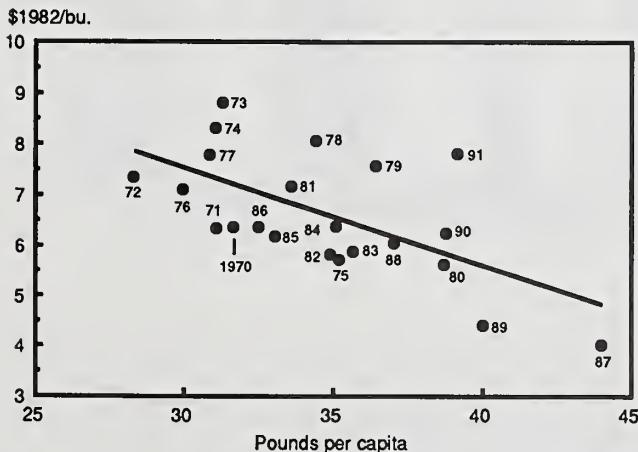


Figure A-2
U.S. Apples: May 1 Cold Storage Stocks and May Fresh-Market Grower Price

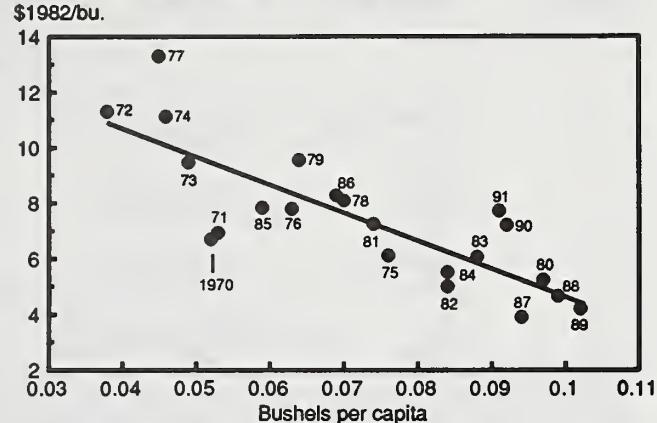


Figure A-3
U.S. Fresh-Market Apples: November and February Grower Prices

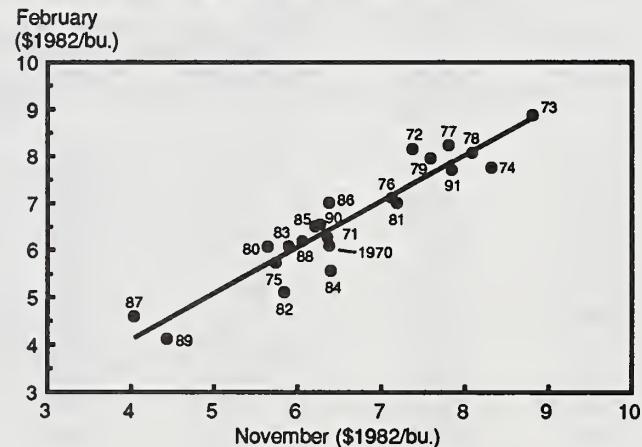


Figure A-4
U.S. Fresh-Market Apples: November and May Grower Prices

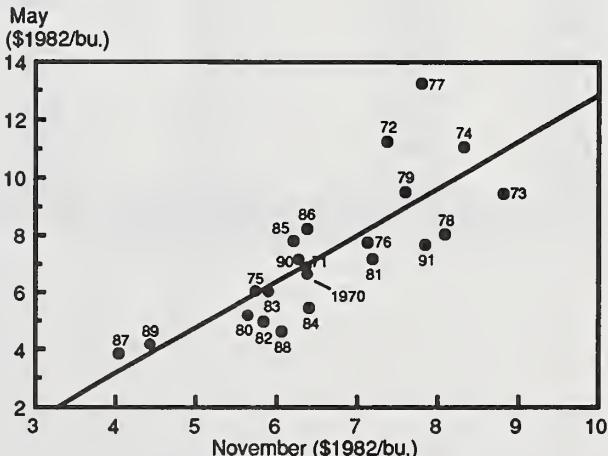


Table A-1--Regressions of price on price or price on supplies 1/

Equation	Regression variable		Coefficient		Standard error of the predicted price	R-square
	Predicted	Predictor	Constant	Slope		
		Dollars per bushel (\$1982)			Dollars per bushel (\$1982)	
1	November price	Total production	13.33	-0.193	0.96	0.39
2	May price	May storage stocks	14.57	-99.0	1.43	0.67
3	February price	November price	0.178	0.982	0.43	0.89
4	May price	November price	-3.30	1.618	1.49	0.64

1/ Prices are packinghouse-door-equivalent U.S. average (dollars per bushel, deflated by GNP deflator). Supplies are total U.S. apple production (pounds in equation 1) and May 1 fresh-market apples in cold storage (bushels in equation 2) as reported by International Apple Institute. Both supply variables are adjusted to per capita basis (divided by U.S. population). Regression estimated with OLS using 1970-1991 data.

Source: National Agricultural Statistics Service (prices), USDA and International Apple Institute (stocks).

Table A-2--U.S. grower prices received for fresh apples, total production, May 1 cold storage stocks, population, and gross national product deflator, 1970-1991

Year or season	Population	Gross national product deflator 1982 = 1	Grower price received			U.S. apple production 1,000 pounds	Fresh-market apples in cold storage Bushels
			November	February	May		
	Millions	-- Dollars per bushel --				1,000 pounds	Bushels
1970	201.9	0.42	2.68	2.57	2.81	6,397,700	10,511,585
1971	204.9	0.44	2.82	2.79	3.08	6,373,200	10,825,243
1972	207.5	0.47	3.43	3.80	5.25	5,878,800	7,791,395
1973	209.6	0.50	4.37	4.41	4.70	6,565,000	10,194,090
1974	211.6	0.54	4.49	4.20	6.01	6,579,700	9,745,874
1975	213.8	0.59	3.40	3.40	3.61	7,530,000	16,301,206
1976	215.9	0.63	4.49	4.49	4.91	6,472,200	13,707,303
1977	218.1	0.67	5.25	5.54	8.95	6,739,600	9,828,401
1978	220.5	0.72	5.84	5.84	5.84	7,596,900	15,449,546
1979	223.0	0.79	5.96	6.26	7.52	8,126,100	14,243,734
1980	227.8	0.86	4.83	5.21	4.49	8,818,400	22,157,338
1981	230.2	0.94	6.76	6.59	6.80	7,739,600	17,143,770
1982	232.5	1.00	5.84	5.12	5.00	8,122,000	19,437,449
1983	234.8	1.04	6.13	6.34	6.30	8,378,500	20,643,902
1984	237.1	1.08	6.89	6.01	5.92	8,324,000	19,968,205
1985	239.3	1.11	6.89	7.22	8.69	7,914,500	14,018,131
1986	241.7	1.14	7.27	7.98	9.41	7,859,000	16,731,384
1987	244.0	1.17	4.75	5.42	4.58	10,742,100	22,921,507
1988	246.4	1.21	7.35	7.52	5.67	9,128,000	24,401,700
1989	248.8	1.26	5.59	5.21	5.29	9,962,800	25,487,855
1990	250.0	1.31	8.23	8.61	9.45	9,696,800	22,893,889
1991	252.6	1.36	10.63	10.46	10.50	9,898,700	23,074,452

Source: U.S. Department of Commerce (population, gross national product deflator) U.S. Department of Agriculture (prices and production), and International Apple Institute (storage stocks).

List of Tables

Tables	Page
1. U.S. monthly-average price indexes for fruit, selected months, 1991-92	4
2. Apples: Regional production, 1990, 1991, and indicated 1992 production	6
3. Apples, commercial drop: Total production and season-average price received by growers, 1990, 1991, and indicated 1992 production	8
4. Banana imports, United States, 1989-92	9
5. Grapes: Total production and season-average price received by growers in principal States, 1990, 1991, and indicated 1992 production	11
6. Pears: Total production and season-average price received by growers, by States and Pacific Coast, variety comparison, 1990, 1991, and indicated 1992 production	13
7. Peaches: Total production and season-average prices received by growers, 1990, 1991, and indicated 1992 production	16
8. Apricots and nectarines: Total production and season-average price received by growers, 1989, 1990, 1991, and indicated 1992 production	16
9. Cherries, sweet: Total production and season-average price received by growers, 1990, 1991, and indicated 1992 production	17
10. Cherries, tart: Total production and season-average price received by growers, 1990, 1991, and indicated 1992 production	17
11. Plums and prunes: Production and season-average price received by growers in principal States, 1990, 1991, and indicated 1992 production	17
12. Kiwifruit: Acreage, production, season-average grower price, and value, California, 1985-91	19
13. North American blueberry production, 1991-92	21
14. Strawberry deliveries for processing, 1991 and 1992	22
15. Strawberries: Acreage, yield per acre, and production for major States, 1990, 1991, and indicated 1992 production	23
16. Cranberries: Total production and season-average price received by growers, 1990, 1991, and indicated 1992 production	24
17. United States: Orange juice supply and utilization, 1985/86-1991/92	30
18. Brazilian orange juice: Supply and utilization, 1985/86-1992/93	30
19. Tree nuts: Supply and utilization, by commodity and marketing year, 1987/88-1991/92 forecast	33
 Appendix tables	
A-1. Regressions of price on price or price on supplies	36
A-2. U.S. grower prices received for fresh apples, total production, May 1 cold storage stocks, population, and Gross National Product deflator, 1970-1991	36

List of Figures

Figures		Page
1. Fresh Fruit: BLS Consumer Price Index	4	
2. Processed Fruit: BLS Consumer Price Index	5	
3. Fresh Apple Grower Prices	6	
4. U.S. Per Capita All-Wine Consumption	10	
5. U.S. Fresh Pear Consumption	12	
6. U.S. Stone Fruit Production	14	
7. U.S. Cherry Production	15	
8. U.S. Olive Production	18	
9. U.S. Olive Production and Season-Average Grower Price	18	
10. U.S. Grower Prices for Fresh Strawberries	22	
11. U.S. Production and Utilization of Cranberries	24	
12. California Oranges: Equivalent On-Tree Returns for Fresh Use	26	
13. Domestic Orange Shipments	27	
14. U.S. Oranges: Fresh Utilization	27	
15. U.S. Oranges: Processed Utilization	28	
16. Florida Oranges: Equivalent On-Tree Returns for Processed Use	28	
17. Orange Juice Futures Price	29	
18. U.S. Grapefruit Production	31	
19. All Grapefruit: Equivalent On-Tree Returns	31	

Appendix figures:

A-1. U.S. Apples: Per Capita Total Production and November Fresh-Market Grower Price	35	
A-2. U.S. Apples: May 1 Cold Storage Stocks and May Fresh-Market Grower Price	35	
A-3. U.S. Fresh-Market Apples: November and February Grower Prices	35	
A-4. U.S. Fresh-Market Apples: November and May Grower Prices	35	

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